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Original Articles

THE TREATMENT OF SYPHILIS AND PARASYPHILIS OF THE NERVOUS SYSTEM*

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The relation of syphilis to the occurrence of nervous disease has ever given rise to extensive and intensive study. To ponder all its vast and various aspects would mean to commit onesself to a task truly Herculean and fitting neither the title nor the purpose of these remarks. One may be pardoned, however, focusing the attention, by way of introduction, upon a few bare yet basic facts, which, when categorically discussed, may assist to an intelligent conception of the therapy in syphilitic and parasyphilitic affections of the nervous system. The first of these to require re-emphasis is that syphilis of the nervous system is never or hardly ever syphilis of nerve tissue. The specific lesion of the nervous system, be it understood, is presumably microbic in origin, essentially neoplastic in type, attacking primarily the vascular and interstitial structures, and only secondarily encroaching upon the nerve cell and fiber, disturbing its function and eventually destroying it, through local tissue death. By the term "neoplastic" it is not intended to convey the idea, erroneously held by many, that all or nearly all specific lesions are veritable tumor masses, gummata, syphilomata of more than appreciable size. On the contrary, the term includes or, better said, implies simple inflammations, cellular infiltrates, exudates and the smallest of nodular or gummy excrescences. An allusion to cerebral syphilis, for instance, should not conjure up the sole image of a large solitary tumor, except when other factors in the variant pathology of lues have been dismissed as untenable or improbable. The artery that supplies nerve tissue proper, the neuroglia that supports it, the membrane that shields it, play rôles not to be despised in the causation of nerve cell necrosis. Stating it somewhat differently: The morbid processes underlying the polymorphous symptomatology of syphilis of the nervous system in order of their importance and frequency are: (1) Syphilitic arteritis; (2) syph-

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ilitic meningitis (inclusive of cranial nerves); (3) gummata. Syphilis of the nerves may be said to occur, but it is rare—very rare indeed. Just what determines that the nervous system should become involved and which part of it, we have no way of knowing, but in view of its protozoon etiology the explanation is at hand that (1) the spirocheta elaborates a virus of variable toxicity, having a special affinity for nerve structures, or (2) the nerve tissues of certain individuals have a lessened resistance for certain neurotoxins in the virus.

Of all the organic systems, the nervous system pays the heaviest tribute to the "tertiary" period of syphilis, and this assertion brings me to the point of referring briefly to the misconception by not a few of the word "tertiary." Be it observed that the word "tertiary" bears no relation to the time interval between the acquisition of chancre and the later manifestations of the disease; it merely emphasizes the kind of lesion. Those lesions of syphilis which are local and as such destructive of tissue are properly called tertiary. It matters not at all whether syphilis of the brain or cord follows the chancre as early as eight weeks, or as late as twenty years—it yet remains a "tertiary" phase of the disease. It is quite true that clinical experience has taught neurologists to believe that a majority of the cases of nervous syphilis are destined to occur within three to five years from the date of primary infection, with the incidence steadily decreasing after that, but such a chronologic criterion need not render a diagnosis doubtful when made at even a much later period.

These relations clear, it may be said in summary that, when disease of the nervous system has its *origin* in syphilis, is in its pathology of the *nature* of syphilis amenable and responsive to the therapy of syphilis, then we are justified in postulating syphilis of the nervous system.

And what constitutes parasyphilis? When *nerve elements proper,* that is, cells and fibers, undergo *degeneration ab initio,* a considerable period of time *after* syphilitic infection has occurred, as is indeed the case, we are disposed to regard that process as parasyphilitic.

The parasyphilitic diseases, so designated by Fournier, chief of which are tabes, general paresis, and a combination of the two, tabo-paresis, are in all probability induced in some manner by syphilis, but reveal a pathology unlike that of nerve syphilis, and are not prone to succumb to specific therapy in the sense that does syphilis. I do not, however, share in the belief that the pathology is totally dissimilar to that of syphilis, or that specific treatment is wholly contraindicated, for I am familiar with the occurrence of tertiary lesions in frank tabes and paresis, and have in certain cases, particularly of the former, noted the good effect of specific treatment—but of this I shall say more presently.

In the light of recent investigations and contributions to the syphilis problem, there is good cause to predict that the etiologic and therapeutic position of the disease will be greatly strengthened by the discovery of the spirocheta pallida by Schaudinn and Hoffmann, and the sero-diagnostic reaction of Wasserman. The well-nigh constant demonstration of the former in the lesions of syphilis and the invariable positive reaction of the latter in individuals acknowledging to earlier infection would seem to have placed these newer criteria well beyond the sphere of speculation and doubt. That the spirocheta pallida appears not only in the virus of the primary sore, papule and gumma, but has been demonstrated by Hoffman on the inner wall of a cerebral vessel showing syphilitic arteritis is a point worthy

of note and not without its direct bearing upon treatment.

Because of its field of application in syphilis of the nervous system merely a word in passing about the Wasserman test, which aims to ascertain the solubility or insolubility of suspect blood when admixed in a test tube with an already prepared serum formula. If the suspect blood is soluble, it means that syphilis of reaction is absent; if the blood remain insoluble, it means that syphilis of reaction is present; in other words, solubility means a negative and insolubility a positive test.

In some of the cases of nerve syphilis and parasyphilis recently under my care, and in others observed by my colleagues, this test was made, and with the laboratory kept in ignorance of the clinical diagnosis and patients' confession of syphilis, it in every instance returned a verdict of "positive." From the literature, recording to date a vast number of cases, in which the test has been used to confirm antecedent syphilis, one gains the impression that we may be called upon to again revise our present notions of syphilis toxins and parasyphilis. The fact that the Wasserman test has been positive in seventy per cent of tabes cases and ninety per cent of general paresis lends force to the argument presented some time ago by Lesser, Bose and others that the late manifestations of degeneration of the nervous system caused by the virus of syphilis may rightfully be construed as a fourth stage of syphilis. Many of the results with antisyphilitic remedies would seem to negative this contention, but, on the other hand, some of the experiences with mercury and iodides in checking the progress of these diseases would tend to support the view.

The test is surely full of promise where it is desirable and even imperative to make the early diagnosis in a doubtful case, and institute prompt treatment.

Nowhere are we more in need of this direction than in cases of latent or denied syphilis presenting symptoms suggestive of brain tumor or brain syphilis. The therapeutic test for so long applied with watchful expectancy to make the diagnosis in these cases, will then fall into disuse.

TREATMENT.

In the matter of treating nerve syphilis and parasyphilis, we encounter a diversity of opinion that is but the natural sequence of a lack of fuller information all along the line of etiology and pathology. It may be well first to allude to some well-established facts concerning several methods of treatment, obtrude some personal experiences, and conclude with a resumé that is in consonance with the best and latest knowledge we have acquired.

If, for the purpose of completeness, I refer to a positive prophylaxis against syphilis of the nervous system, I must of necessity mean the accomplishment of an ideal prophylaxis against the primary sore, with the aid in one form or another of an antisyphilitic vaccine. Whereas this seems far from realization, yet the experiments of Metchnikoff and Roux are indicative of a scientific preoccupation in this direction. Mere mention of their work seems in place here, also because of the calomel ointment (calomel, one part, to lanolin, three parts), which they advocate as a lubricant prophylactic to be applied to the genitalia immediately or within an hour after suspicious intercourse. The authors remark that in their experiments this remedy has afforded immunity against primary infection, and accordingly it has been issued to the army by the Secretary of War in France as a prophylactic measure against venereal disease.

The initial lesion once acquired, nothing short of a prompt, efficient and sufficiently long-continued course of mercury and iodides is indicated; when well accomplished, the dire tertiary consequences to the nervous system will be prevented in the majority of cases. This, I think, none may doubt, since it has been estimated from very large and convincing statistics that when *properly* treated perhaps ninety per cent of the cases get well and remain so. A retrospect of the cases which the neurologist is privileged to see forces the conclusion, however, that the cases have been treated either imperfectly, improperly, or not at all.

What constitutes, from the neurologic view-point, the best treatment in these cases?

Extremely urgent instances aside, I think it is the consensus of opinion among neurologists that the inunction method, the Schmierkur of the Germans, has on the whole given the best satisfaction in nerve syphilis. It may be inferior to the oral, hypodermic or intravenous method in point of rapidity and cleanliness, but it fulfills most of the demands made upon it in most of the cases, is simple of application, less prone to produce salivation, and obviates gastrointestinal distress. I believe that to have the unguentum hydrargyri dispensed in an exact dosage in wax papers, with written instructions to the patient for its use, contributes greatly toward the efficiency of the method. It has been my custom to prescribe unguentum hydrargyri, one-half to one drachm, to be rubbed nightly by the patients themselves when they are able to, and the specifications call for one thorough rubbing on a different non-hairy, flexor surface each night for five nights, this to be followed by a warm cleansing bath on the sixth, a rest on the seventh, and then a fresh series of five rubbings on successive nights, with interruptions of bath and rest as before. The number of such series required is variable, four having sufficed in some of my cases, and eight in others. In private practice I have found most of the patients very ill at ease over the denial of daily baths, and after making concessions have come to believe that a short cleansing bath daily in the morning is no serious infraction upon the technic. In two of the considerable number of cases in my records I met with non-absorbing skins, which no amount of rubbing could affect, and after a brief trial, resort was had to the deep injections. What I have said of the officinal unguentum hydrargyri applies to he vasogen preparations containing from 25 to 33 per cent of mercury. Occasionally one meets with circumstances where it is desirable to suppress the real facts surrounding a case of lues, as in the congenital types of the disease, and here antispecifics in agreeable disguise may be given in the form of colloid calomel (calomelol), used as calomelol salve or unguentum Heyden, which contains an additional 2 per cent of free mercury (Abt).

When resorption from skin surfaces has proven slow, I suggest that the site of inunction be previously prepared by cleansing with soap and warm water, then alcohol or ether, and complete this toilet by the application of a tight flannel bandage over the part rubbed.

With these qualifications the endermic administration of mercury has given me most gratifying results. The symptoms of brain syphilis will appear less ominous I think if we appreciate that *mercury* in large enough doses constitutes the remedy *par excellence.* It is mercury that annihilates the spirocheta pallida, and if, as has been demonstrated, this protozoon may reside in the cerebral vessel walls of the syphilitic, then it is the mercurials that are cardinally indicated and iodides but the essential adjuncts in the therapeutic scheme.

So much depends upon the pathology

in each case that generalizations as to the degree of recovery are quite difficult to formulate. The area of softening in the brain resulting from the complete exclusion of a cerebral terminal artery is not likely to be irrigated back to life, nor will the brain cells compressed in a patch of scar tissue, reminiscent of a destructive gumma, derive sustenance and potentiality from all the mercury and iodides that can be safely borne.

Small wonder then that our disappointments are not a few. The lesson to be learned from this class of cases is that treatment should not only be *adequate,* but *timely.* There are types of brain syphilis which carry a patient to dissolution in spite of the most ideal therapeutic premises, but happily they are rare. In cerebral lesions the results of treatment are sometimes marvelous, but semi and complete failures are quite more numerous than cures. In spinal syphilis the proportion of failures is far greater than the successes.

When it seems necessary to get quick and complete control of a syphilitic lesion, initiated, for instance, by a single convulsive (epileptiform) seizure, the inunction treatment may well be waived in behalf of the more rapid administration of mercury by the deep intramuscular injection. I have no hesitancy in stating a preference for this method at *critical* periods in the disease. When it is intended to establish reservoirs of mercury in the deep muscular tissues from which slow resorption takes place, the insoluble preparations, such as calomel and the salicylate of mercury suspended in sterile oil or lanolin are used. It is maintained by Gottheil, who is the most ardent advocate of insoluble mercurials in this country, that they are free from danger, painless and of greater convenience to the patient because of longer periods intervening between injections. The controversy that has been waged in dermatologic circles concerning the advantages or disadvantages of the soluble versus the insoluble mercurials need not receive extended mention here, but I have found that the injection of insoluble mercurials in several cases caused quite as much pain as is experienced with the soluble corrosive sublimate. The dangers arising from the deposits of mercury located in the deep tissues seem to me very real ones, and for this reason I have been content to use exclusively the hypodermics of corrosive sublimate in doses varying from 1/12 to ¼ grains injected every second or third day. Soreness in the gluteal muscle masses is quite sure to follow, but at its worst it is transitory. The danger of thrombosis or embolism by penetrating a vessel is not great in these regions, but the remote possibility of so serious an accident should lead to great precaution in the technic, which it is needless to add includes rigid asepsis.

The vast majority of syphilitic cases in this country are subjected to the oral administration of mercurials, perhaps because it is convenient, and favors concealment of the patient's disease. This method, with its tendency to produce gastro-intestinal disturbance, stomatitis and diarrhea, is not free from serious objections, and in neurologic practice is the least dependable and therefore the least favored of all the accepted methods. If, for a particular reason, it seems indicated, the protiodid, grs. ⅛ to 1/3, or the hydrargyrum tannicum oxydulatum (Lustgarten), grs. 2 to 4 in pill form may be given after meals.

Of recent years the intravenous injections of mercury have been suggested, and one can understand how, in the severe, rampant and fulminating types of the disease, they would act with great promptness and certainty, but the risk of thrombophlebitis and embolism, in my opinion, outweighs all considerations in their favor. I concede their

place in therapy, but have not as yet availed myself of their use.

In the ambition to check and control nerve syphilis, mercury in any of its forms will surely do harm if given injudiciously, meaning in doses either too large or too continuously. The dangers of chronic mercurialism require no emphasis here, but I have so frequently seen flagrant neglect of the teeth, gums and mouth, that it seems pertinent to reiterate the use of mouth washes, tooth powders and gargles three times daily after eating, to preserve oral cleanliness and prevent stomatitis.

In treating syphilis of the nervous system, it has been customary to administer the iodides conjointly with the mercury, but the neurologist with experience will, I think, ascribe his good results to the use of mercury and not iodides. This, however, is not equivalent to saying that the iodides do no good, for in truth they are of inestimable value, and the best evidence of this fact is the disposition on the part of American neurologists to give massive doses, from two to four hundred grains daily. On the continent small doses of from thirty to sixty grains daily are advocated, but it has always seemed ridiculous to me to be prejudiced by the size of a dose alone. It has been my principle to give enough, plenty, and then some more if that did not suffice. There has been a good deal of fastidiousness in the matter of iodide administration, in which, at one time or another, we all have been guilty of participation. I have noted the best results with the saturated solution of potassium iodide in ascending doses from fifteen to as high as one hundred drops, three times daily, given after meals, well diluted in water, vichy or seltzer, or milk. Sodium iodide has found favor in nerve syphilis, and is said to contain more iodine, be less irritating to the stomach and less prone to produce iodism. Iodism, except in idiosyncratic individuals, is best prevented by large dilutions of the drug in milk or aerated water, and especially where three to four hundred grains constitute the daily dose, it is well to dissolve the entire amount in a quart or more, to be taken in divided doses during the twenty-four hours, thus avoiding gastric distress and other ill-effects. Iodo-nucleoid, a preparation containing 23 per cent iodine, is a pharmaceutical refinement of iodide possessed of great merit, and may at any time be given in a dosage of from five, twenty, and even sixty grains, three times daily, for a long period of time without giving rise, except in very rare instances, to gastric distress or other familiar signs of iodism. I have given it repeatedly in doses of sixty to one hundred grains, three and four times daily, without apparent ill-effect, whereas ten-drop doses of the saturated solution for the same patient were not at all well tolerated. Iodalbin in similar doses is very readily assimilated, and tends to act with good effect. It is advisable to reduce excessively large dosage after a month, and then continue for eight to ten weeks with fifteen grains two or three times daily, as the condition may demand. Warm baths, copious water-drinking and free catharsis will keep the elimination at the point necessary to prevent iodism. When the first energetic treatment has done all that could be expected of it, patients should be encouraged to take a course of iodide and mercury every six months for five years, and some specific treatment is indicated for a short period every year for the rest of their lives. It is a mistake to think that the exhibition of antispecifics in syphilis puts an end to the medical obligations toward a case, for we not infrequently encounter states of malnutrition, even cachexia, and profound anemias which require the most careful and judicious

employment of rest, diet, hydrotherapy, fresh air, and alterative tonic treatment. In the past few years the French have treated cases of both primary syphilis and syphilis of the nervous system, with atoxyl, an arsenical preparation used subcutaneously in doses of about one-half to two grains, two and three times daily. There is a great diversity of opinion as to the utility of this alterative remedy. I have resorted to its use in cases of anemia, neurasthenia, and in a few instances of nerve syphilis, but am not at all convinced of its superiority over other arsenical preparations, such as sodium cacodylate or the liquor arsenicalis.

Germane to any discussion of parasyphilis and in keeping with the limits of this paper, I think it well to outline only a few of the essentials in the treatment of the two affections, tabes dorsalis and general paresis. In a prefatory way, I might say that the very slow progress and tendency to spontaneous remission in tabes dorsalis makes it impractical and well-nigh impossible to suggest a therapy for certain "stages," such as the pre-ataxic, ataxic, paralytic, and so forth, which are merely convenient and now obsolete descriptive terms. It should be appreciated that from the very first this disease is incurable, progressive, often remaining stationary for a long time in the benign and milder forms, and yet capable of marked improvement following the exhibition of diverse *reasonable* therapeutic measures employed singly or in such combination as to meet the requirements of each case. There should be no hesitancy, however, in acknowledging that, on the whole, only a minority of the cases are influenced in their course or arrested in their development.

Recognizing tabes as a late sequel of syphilis, it is only natural and logical to ask, Will the prompt and energetic treatment of the antecedent syphilis diminish the liability to tabes? Only the most extensive and exhaustive inquiry can establish the precedent for opinion on this point. Two quotations are worthy of mention. Neisser (*Deut. Med. Woch., 1902*) has tabulated 455 cases of tabes; 254 (57%) had received no primary antiluetic treatment; 18 (¼%) were adequately treated, and 173 (39%) inadequately. Schuster (*Deut. Med. Woch., Dec., 1907*), in a critical analysis of his own cases and those of others, arrives at quite opposite conclusions, maintaining that (1) the clinical average of tabes and paresis is identical, whether antecedent syphilis has been treated with mercury or not. (2) The metasyphilitic nerve sequelæ do not appear later in the patients treated with mercury than in those untreated. (3) The beneficial influence of antispecific therapy for the prevention of parasyphilitic nerve lesions is thus far not convincingly proven.

In our present state of knowledge extreme pro and con views will continue to enliven the pages of our literature on this subject, but from such sources as Erb, Fournier, Neisser and Leredde I borrow the confirmation to my own observations of about one hundred tabetics, and venture the opinion, *firstly, that adequate antisyphilitic therapy does greatly diminish the liability to greater tabes, and, secondly, that all forms of syphilis, especially the milder ones, those treated either indifferently or not at all, should and must be held in higher therapeutic regard.*

The diagnosis of tabes once established, neurologists are again confronted with the question as to the propriety of antispecific treatment, and again are reminded of an ardent controversy that has been carried on for many years, and is still *sub judice.*

Many neurologists of experience accept as valuable the administration of mercury and iodides in tabes, by some they are liberally discounted, and by

others again, absolutely discredited. I recall cases, and they were nearly always the ones in which the interval between lues and tabes was short (at or under five years), that showed marked improvement shortly after and even during the exhibition of mercurials. Ataxia was greatly benefited, incontinence checked, pains controlled, vision improved, optic atrophy retarded and the charted fields of vision restored to near normal. A second group of cases has been wholly unresponsive, and a third I have thought were made distinctly worse by specifics. For this therapeutic variability there is, so far as I know, no adequate explanation, but it prompts a belief not inconsistent with pathologic facts, that the early cases presented tissue changes of *nerve syphilis together with those of tabes, and these were favorably influenced by therapy.* The cases in which treatment was badly borne and wholly without benefit were those well-advanced, of long standing, associated with emaciation, cachexia or grave anemia. From out of the increasing mass of contentions, I derive some comfort from the following attitude: In tabes (1) antispecifics should be resorted to in the *early cases and early in these cases,* for then they are capable of doing good. (2) Antispecifics are inert in many cases and positively harmful in others. (3) The plan of specific treatment is much the same as that heretofore mentioned, and contemplates the use of both mercury and iodides.

Mindful of the undue length of this paper, I shall, with your permission, omit all reference ot the care of the bladder, the control of lancinating pains, the crises, and so forth, but pass on to a moment's reflection of *ataxia.* This most important and distressing symptom of tabes has for years received careful consideration and study, chiefly from Frenkel, of Heiden, who finally was able to formulate a plan of treatment for the incoordination now known as Frenkel's reeducation method which postulates the "necessity of learning by systematic practice coördinated and proper movements in place of ataxic ones." A perfect system of graduated exercises, first simple and later more complicated, is performed every day for five minutes, with a rest period of five minutes following. Patients are directed to intelligently and perseveringly practice certain movements and steps in many directions until they can do them correctly and with satisfaction and comfort to themselves. For the bed-ridden patients exercises of flexion, extension, abduction and adduction should be performed in the prone position, with deliberation and exactness. Such practice results in a most gratifying improvement of gait and station in patients who for several years may have been utterly helpless. I have had occasion to observe the most astonishing feats of locomotion even after a few months of these exercises, but the conviction has grown upon me that strict adherence by the patient to the highly complicated plan of Frenkel is not essential, for I have seen most marked improvement follow my simpler suggestion that exercises be done in a hop-scotch, chalked out on the bedroom floor. A pattern parquet floor will suffice, and the seams in the carpet or cracks in the sidewalk will answer the purpose, provided the maneuvers are planned to meet the requirements of each case, and the proper patience is observed in their execution. The inference to be drawn, then, is that the principle of the *Frenkel treatment is an excellent one, but unvarying obedience to a single formulated plan or system of exercises is not necessary for the attainment of good co-ordination.*

A factor contributing not a little to ataxia of the lower extremities is *hypotonia,* which, when present in the musculature of the foot tends to destroy its

long arch and give rise to pronation. A correction of the faulty mechanism of the foot by a shoe modified to meet the individual requirements has in three of my cases, together with the Frenkel exercises, offered the most favorable treatment for marked incoördination. Before leaving this topic, I desire to emphasize that in cases presenting ataxia of very acute onset and rapid progress, attended with great weakness and debility—the so-called *acute tabes*—it would be most reprehensible to suggest anything but absolute bed-rest and quiet.

It is sometimes very difficult to decide whether or not a patient should know his true condition, and be apprised of it in terms of locomotor ataxia or tabes. In being too blunt in letting a patient know the truth of his plight, the physician sometimes commits a grievous error. Much will depend upon the temperament of the patient, but in any event he may be told that he has some chronic spinal disorder, capable of control, and relief by judicious and careful treatment. Unpleasant psychic shocks are more than most tabetics can gracefully bear. It is indicated in this, as in all severe chronic conditions, to practice a mental therapy by virtue of which the patient may remain hopeful, encouraged, and stimulated to activity and obedience in the matter of taking proper care of self. This is no idle play of words, but an attempt to admonish the therapeutist in a matter of which he is either wilfully neglectful or woefully ill-advised. I know of tabes cases in which a swift and sudden decline could be attributed to no other cause half so readily as to psychotherapeutic indifference and disregard, and I know of others again whose every advance and gain was merely the reflection of a well-thought-out plan of mental support and suggestion. A patient should be made to change his occupation, if that were necessary or desirable, and should not want for the constant direction and supervision of his working and resting hours. The psychic side of the tabetic must never be lost sight of.

The certainty with which the prediction of dissolution can be made in general paresis would seem to make any references to the effect or non-effect of treatment quite superfluous, but the casual relation to syphilis again brings to mind a few points of the controversial order worthy of passing comment. More difficult even than in tabes is it to say that this or that case of paresis has improved under treatment for syphilis. But the same reason that prompts my use of mercury and iodides in the early stages of tabes, in the hope of influencing pathological changes of active syphilis, inclines me to their administration in the incipient stage of paresis. I think that all alienists can record a few instances of long remissions in paresis which at first thought are ascribed to specifics, but in not a few marked improvement is the result of all measures except those of specifics. The tendency to discountenance the importance of syphilis in subsequently developing paresis is best seen in the efforts of the Scottish school (and in this country by the researches of O'Brien) to identify a diphtheroid bacillus and mixed toxic infection as the cause, and then raise the question of serum treatment. The investigations thus far presented are interesting, but, in my opinion, far from convincing.

I think I need not dwell upon the necessity for isolation, institutional regime with its approved methods of nursing, hydrotherapy, exercise and feeding. Those who have seen the mental, moral and physical degeneration of the paretic progress steadily to the point of total oblivion will unhesitatingly acknowledge the rôle of the sanitarium and asylum in the life of these unfortunates.

In having brought this topic of perennial interest to your notice, I have sought to do little more than assemble in the light of latter day research, the larger facts and broader opinions, and thus make them the targets for discussion. To epitomize:

(1) Syphilis and parasyphilis of the nervous system continue to stand in direct and indirect causal relation to primary syphilis, although their nosologic position is very likely to undergo revision if the Schaudin discovery and sero-diagnostic values of today stand the test of time and further development.

2. The therapeutic position, it is hoped, will also share in this signal advance, but in the expectant interval it is well to insist that neither a routine nor haphazard administration of antispecifics is commendable.

3. Treatment to be intelligent must meet the requirements of each case, with due regard for the many collateral, chiefly supportive measures.

4. Antispecifics when indicated in these conditions mean *mercury and iodides.*

5. In the vast majority of cases occurring in neurologic practice mercury by inunction is the method of choice.

6. The "Frænkel exercises" treatment for the ataxia of tabes loses none of its efficiency if a departure is taken from the original complex plan to a simpler one.

Chinese College of Medicine.—What are reported as preliminary plans for the establishment of a medical college in China, contains the startling announcement that a 12-year course is contemplated.

The report states that "In accordance with Chinese ideas the course is to be divided into three years of old Chinese medical practice and six years of modern western training. At the end of these nine years there is to be a thorough examination and then three more years of study and trial practice shall be demanded before the students shall be qualified doctors. This examination must also be passed by people who are now practicing on certificates from existing medical schools. No one who does not hold a literary rank of a fixed grade shall be allowed to take these examinations, regardless of where he studied. Compensation to be paid by the students who will study at this new school is to be fixed at a future meeting of men appointed to have charge of the institute."

Were we to be given our choice between the abbreviated courses of some of the late departed (but not lamented) "diploma mills" in our country, and a 12-year period of study before independent medical work were our privilege, we would undoubtedly prefer the latter—other things being equal. But this last condition means many things, not the least important of which is the individual's ability to devote 12 potential years to non-income bearing work. This alone would prove a tremendous barrier to the practicability of such a scheme—not that splendidly equipped practitioners would not be the product of such an institution.

However, any consideration given the matter is as yet mere talk at random, because thus far the above communication is the only information at our command.—*Ex.*

PERSONAL EXPERIENCE WITH PROSTATITIS*

FREDERICK W. ROBBINS, A.M., M.D.,
Detroit.

Omitting this afternoon all questions regarding the pathology of prostatitis, I wish to call your attention to the clinical side of the subject based upon a review of the last two hundred cases taken from my case book. I shall in no way attempt to tabulate statistics. Many of these cases have been seen in consultation, the treatment being left to the physician kind enough to consult me. Others have discharged themselves usually when so nearly recovered that the need of further treatment was not appreciated, so that statistics as to duration of the disease and time necessary for a cure would be worthless or impossible. In this series of cases it may be fairly stated that about five per cent had no venereal history and research revealed as probable cause masturbation, in several cases; congestion and inflammation due to exposure or working in damp cellars, sewers, hauling seines, etc., in others, while that group of conditions, including sedentary life, overfeeding with little exercise, which is productive of oxaluria, seemed to be the logical factor in a certain proportion of cases.

Two or three years ago I was very much interested in a report of several cases of prostatitis treated by Dr. Max Ballin by approaching the prostate through a transverse perineal incision, opening into and curetting the prostatic lobes and packing the cavities with gauze. The very fact that this procedure has been adopted affirms the presence of positive pain or distress in this class of cases demanding relief. Having in mind, whenever possible, to add to the doctor's statistics, for the operation seemed to me an excellent one in cases such as he reports, I have examined my cases with a good deal of care and have not in this series found a single one whom I could conscientiously send to the operating table. When my syllabus went to the secretary I had not reviewed these cases, and after doing so am quite uncertain as to the extreme nervous phenomena, seen in only one or two cases being due to the prostatitis or only coincident with it.

Frequently after having made a diagnosis of chronic prostatitis, upon asking the physician regarding the previous subjective symptoms, I have learned that because of no special urinary symptoms or perineal distress, no attention had been given to the prostate gland. In my experience with chronic prostatitis, severe nervous phenomena or great distress has been rarely noted. With the swelling and fever of acute prostatis the constitutional and local symptoms are well known to this audience and need not enter into this discussion.

Because there are no symptoms from which the patient may make his own diagnosis, it does not follow that there are not conditions present leading the physician to suspect prostatitis.

A patient with a history of gonorrhea or sexual excesses, complaining of precipitate ejaculations, of less seminal fluid than had formerly been discharged and other symptoms attributed to loss of manhood is very apt to be suffering from chronic prostatitis. With or with-

*Read at the Manistee meeting of the Michigan State Medical Society, June, 1908.

out these symptoms usually in connection with but over-shadowing them, nervousness, dyspepsia, loss of flesh, etc., found in conjunction with prostatitis and improving as the prostatic condition improves, may fairly be considered symptoms of prostatitis.

Many men have, following a first attack of gonorrhea, frequent remissions, the same yellow discharge containing gonococci, but without the usual period of incubation or urethral discomfort. These patients have frequently been discharged as cured by their physicians. They may have been cured and this attack really be a new infection, but the chances are nine out of ten that a prostatitis has been overlooked and in competent hands such a patient would not have been allowed his freedom, although I fully appreciate that the doctor is by no means always to blame.

One often hears of and sees the so-called morning drop. I have histories of many patients who have called on me because of this morning drop. They have gone the rounds and have used one injection after another. Some of them may have had no yellow discharge for many months; they have cohabited often with various women; they have never infected their wives—and this by no means always because the women are immune because of previous infection with this particular individual germ. Where such a morning drop is present it is our duty to know from whence it comes and what it means. It may be the result of congestion or inflammation back of a stricture. It may be from chronically inflamed Morgagnian crypts or glands of Littré. It may be from localized patches of inflammation along the pendulous urethra. The two-glass test may show a perfectly clear second portion, three glass test may not show a clear second portion and a few plugs in the third, but on these accounts let no physician fool himself, for a great majority of these cases will be found to have a chronic prostatitis.

The diagnosis is not always so easy as one might suppose. A man in middle life or less may have strictures readily discovered. The urethroscope may show Morgagnian crypt infection and still the morning drop be unaffected by systematic sounding or applications of any kind to the pendulous urethra. I find that many a fee has been paid by patients who have not been treated for the conditions which caused their trouble.

It seems to be easy to diagnosis diseases of the anterior urethra and difficult for many to appreciate abnormal conditions in the prostate and seminal vesicles. Speaking of the vesicles, I have come to believe that whenever seminal vesiculitis is present there is also prostatitis, although the converse is not true.

As to diagnosis: Having stated that by far the majority of cases of prostatitis, but more particularly chronic prostatitis, are subjectively symptomless one must conclude that the objective findings must be studied for a diagnosis. It is not necessary at this time to more than state the fact that prostatitis may be present in conjunction with disease of the neighboring organs, from which it must be differentiated. Instrumental examinations are rather for the purpose of excluding diseases of the urethra or bladder than for any aid they may give regarding the prostate gland itself.

The examining finger in the rectum and microscopical examination of prostatic fluid are the only reliable means of determining a diagnosis.

With reference to the examination with the finger one feels the prostate under a variety of conditions. There is the small, hard prostate which seems to show, if not an increase in the fibrous tissue, at least a lessening of the glandular structure. I have found in a number of cases where the compratively young man has been addicted to the habit of excessive

masturbation, he consults the surgeon on account of sexual weakness, is nervous, pale, has frequent emissions of small quantity. A small amount of fluid can be expressed into the urethra by massage, and this will contain only a moderate number of pus cells.

A note in a large number of my cases says one or both lobes soft in the center with a well-marked firmness of the periphery of the gland. There are also quite a number of cases in which the entire gland is soft and I find the suggestion noted that this case seems to me like a wall of a sack where the entire glandular substance had been destroyed by abscess formation; and still others with small, softened areas, perhaps also a few hard, pea-like lumps in the same case.

The prostate of nörmal consistence and size is not at all uncommon, but one cannot in an individual case say that his prostate is not swollen. Prostate lobes differ just as testes differ in size and often from the simple palpation one finds it impossible to diagnose prostatitis, although the great majority are felt to have some of the above mentioned abnormal conditions.

Finally, the supreme diagnostic test must be the microscopical examination of the prostatic fluid. Taking care not to reach the vesicles, after the urethra has been cleared, the prostate is gently massaged. When the fluid comes to the meatus, as it does in most cases, if one finds in it prostatic epithelium and pus cells, he may safely make a diagnosis of prostatitis. When there is not sufficeint fluid to be expressed, the first urine passed in a test tube will carry with it the products expressed and the centrifuged specimen may be examined. Prostatic fluid is a composite of somewhat complicated character and contains a few leucocytes, but it requires more than a few leucocytes to prove the presence of prostatitis, and I think no one would hesitate after studying these two hundred and more specimens to declare them all inflammatory.

To properly discuss the question of prognosis would take in itself more time than is allowed to me, but I wish to say that the prognosis is good as a rule, providing the proper treatment is instituted and the cause can be removed. I do not believe that there are many cases of gonorrhea, and nearly all chronic gonorrheas are cases of chronic prostatitis, which can not be so cured that the patient can with perfect safety marry. Such patients I have seen carry the gonococcus for years, then it has disappeared, the patient has married and been perfectly happy with a healthy family around him.

The symptoms of neurasthenia, due to prostatitis, have entirely disappeared in many instances. The abnormal feel of the prostate recovers its normal character—but not in all cases.

It is scarcely possible to promise a quick cure. More often than not it has taken several months to allay the symptoms for which the patient consulted me, and even more to satisfy myself of a perfect cure. It has been rare that a case has relapsed after careful treatment.

In a few instances the patient has been treated for a year or two and even then evidence of chronic prostatitis has remained, but without the gonococcus. These long drawn out affairs have so impressed themselves upon me that by going over my notes I have been surprised to find how few there are, and my faith in the curability of prostatitis has been greatly strengthened in this attempt to place before you the results of my experience.

Finally a word regarding treatment: In acute cases the object is to prevent abscess formation and promote resolution, and these objects are obtained by employing heat or cold by means of the

rectal psycrophore, stopping all local treatment of the urethra, keeping the bowels open, the urine bland and insisting on rest in bed.

Chronic prostatitis, I believe, is best treated by massage, irrigation and the psycrophore. Theoretically, it seems quite possible to bring about good results by phoresis, but I have had little experience with it. As stated earlier in the paper, I have seen no case where the patient had severe suffering due to an uncomplicated prostatitis. The many cases seen where as a result of inflammation the gland had been destroyed left only a few pus cells in the urine with a small, flabby sack, the prostatic capsule. These patients have not suffered and I have not felt that draining and packing such a sack would add much to the patient's comfort.

The points that I would wish to emphasize are: First, the frequency of prostatitis; Second, That chronic urethritis is usually prostatitis; Third, the necessity of persistent, frequent and painstaking treatment; and, Finally, pessimism must give way to a more optimistic prognosis.

LYMPHATIC LEUKEMIA, WITH REPORT OF THREE CASES

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Leukemia is defined as an "affection of the hematogenous organs, characterized by persistent increase in the white blood corpuscles, associated, either alone or together, with changes in the spleen, lymphatic glands and bone marrow." This definition is not exactly accurate, for cases of leukemia have been reported with an actual leukopenia. Also the disease affects the red cells as well as the white.

Various attempts have been made to classify the different forms of leukemia, but all authorities agree in dividing the disease into two general forms, the spleno-medullary and the lymphatic. Each of these general types has been subdivided in different ways by different authors. The lymphatic form is ordinarily considered the rarer of the two. Osler saw thirty-seven cases of leukemia in his clinics in fifteen years, of which five were acute and eight chronic lymphatic leukemia. The hospitals of Barcelona report one case of leukemia in 59,940 patients; in Heidelberg they report one in 1,137, and in Stockholm one in 1,087, but they do not state whether these were the spleno-medullary or the lymphatic type.

Males are more commonly affected by leukemia than females, the middle-aged more than those of either extreme, below fifteen or over forty-five. The disease is not considered hereditary, but there is on record a report from Cameron of Montreal of a leukemic mother who lost two children of leukemia, and her mother, grandmother and brother suffered with symptoms strongly suggestive of the disease. Leukemia has been found in the horse, dog, ox, cat, hog, mouse and recently Warthin has reported it, for the first time in birds, in the common fowl. The etiology is unknown, but malaria and syphilis have been mentioned as probable causative factors. The etiolog-

*Read at the Manistee meeting of the Michigan State Medical Society, June, 1908.

ical theories will be discussed later.

Lymphatic leukemia, for our purposes in this paper, may be divided into acute and chronic. The acute form begins insidiously, the patient complaining of weakness, and of tiring very easily. This condition obtains for a week or two, up to three or four months, when the symptoms change, and "may suggest many other diseases, as acute tonsillitis, diphtheria, scurvy, typhoid fever, malaria, tuberculosis, ulcerative endocarditis, purpura hemorrhagica, septicemia, pyemia, pernicious anemia, and osteomyelitis" (Emerson). Guinon and Joly classify the symptoms of acute leukemia under three heads: First, those with profound anemia, with glandular enlargement, and hemorrhagic tendencies in the later stages; second, those with hemorrhagic tendencies from the first, resembling ineffective purpura; and third, those pseudo-scorbutic cases, where lesions in the buccal cavity are the chief feature.

The first symptoms of chronic lymphatic leukemia are usually bleeding from the nose and throat, followed soon by gastro-intestinal disturbances. The bleeding lasts for a time and then ceases. The cervical, axillary, inguinal, and mesenteric glands become enlarged, soft, distinct and movable. They vary in size at different times, becoming smaller and harder as the disease progresses. The spleen is sometimes slightly enlarged, and may be greatly so. The liver is usually enlarged, due to diffuse leukemic infiltration. Chronic lymphatic leukemia may be divided, by the blood findings, into the small lymphocytic and the atypical celled, or mixed celled varieties, as represented by cases I and II.

Acute lymphatic leukemia must be differentiated from the diseases enumerated above, while chronic lymphaic leukemia must be differentiated from Hodgkin's disease and syphilitic adenitis. This differentiation can only be made positive, and hence the diagnosis of lymphatic leukemia, acute or chronic, can only be made positive by careful and repeated blood findings. I firmly believe that when these blood examinations are more generally made the disease will be found to be more frequent than is now supposed.

The blood examination shows a wide variation in both the white and red blood cells, but in general the red cells are reduced in number, have polychromatophilic cells in quite an abundance, and also cells in which the hemoglobin forms a mere ring. There are usually poikilocytes present in greater or less degree, normoblasts are usually rare, and the hemoglobin index high. The white cells are increased in number, except in a few isolated cases, and have a large excess of either the large or small lymphocytes, or both, with a corresponding decrease of the polymorphonuclears. The preponderance of large lymphocytes was formerly supposed to represent the acute type of the disease, and the excess of the small lymphocytes the chronic form, but recently this has been shown not to hold true. Forbes and Langmead report ten cases of acute lymphatic leukemia in which the large lymphocytes were in the majority in three cases, the small in four cases and both the large and the small in about equal proportions in three cases. Eosinophiles and mast cells are usually reduced in number; however, there is on record one case of mast cell leukemia in which the mast cells exceeded 30%. In case I of this series the mast cells reached 4.5% at one time and 8.72% at another.

Report of Cases.

Case I. Chronic lympatic leukemia. Mr. Nelson LaP. is sixty-one years of age, of French descent, and was one of a family of six boys and three girls. His father died suddenly and in his sleep at the age of seventy, of unknown cause. His mother died insane at the age of sixty-eight. One sister died of typhoid fever and one of cancer of the stomach. One brother was killed on

the railroad. The rest of the family have always been healthy, as has the patient up until the present illness. For twenty years or more he has had a fatty tumor on the back of his neck. He denies ever having any venereal trouble, but admits exposure in past years.

Early in the spring of 1907 he came to my father, Dr. W. H. Haughey, who has been his family physician for twenty years, complaining of "nose-bleed." All the ordinary remedies were tried without avail, when he was referred to Dr. R. D. Sleight, a nose and throat specialist, whose report follows:

"I examined Mr. LaP. on July 29, 1907, and found that he had a large ulceration of the left tonsil, and the tonsil was very much enlarged. Also the right tonsil was somewhat enlarged. The ulceration was very angry looking. I enquired into the history, and from the character of the ulcer I diagnosed it a specific ulceration. He had had considerable hemorrhage from the ulcer. I painted the ulceration with silver nitrate, and gave him saturated solution of potassium iodid—giving him about twenty grains three times daily. Also gave him a gargle of tannic acid and glycerine. I continued this treatment for about three weeks, when the ulceration healed and the induration of the tonsil subsided."

Mr. LaP. tells us that he took a few doses of Dr. Sleight's medicine, and then could keep no more down, and so put it on the shelf and said nothing. At this time the glands in the neck, axilla, groins, and mesentery became enlarged, and the patient lays this to the iodid of potassium.

The patient also complained of being easily fatigued. He would come home from his work, which was that of running a drill press, and would go to sleep while at supper. He has been troubled considerably with indigestion, nausea, and vomiting, and has had great pain in the region of the stomach.

Dr. W. H. Haughey accepted the diagnosis of syphilis, and placed the patient on inunctions of mercury, with small doses of the iodides, every dose of which he rejected. About this time I also saw the patient, and concurred in the diagnosis of syphilis. This was in August, 1907. Things ran along this way for several months, the patient working part of the time, rejecting the iodides in whatever form administered, but receiving the mercurial inunctions regularly.

In February, 1908, he was still unimproved, and had to quit his work. On February 20, I made a blood and differential leucocyte count with the following results:

Red cells	3,610,000
Leucocytes	65,500
Ratio whites to reds	1/55
Hemoglobin	90%
Hemoglobin Index	1.15

Differential leucocyte count:

Differential leucocyte count:		Normal (for comparison.
Polymorphonuclears	21.5%	70-72%
Small lymphocytes	50.5%	22-25%
Large lymphocytes	21.5%	3- 6%
Transitional forms	1.0%	1- 2%
Eosinophiles	4.5%	2- 4%
Mast cells	4.5%	0.5%
Total lymphocytes	73.0%	25-28%

Many necrotic cells present.

The patient was presented before the Battle Creek Medical Club at one of its Post Graduate meetings, with the diagnosis of chronic lymphatic leukemia. The blood has been studied also by Dr. A. W. Nelson, Bacteriologist at the Battle Creek Sanitarium, who took samples of it for use in the class work of the American Medical Missionary College.

When the diagnosis of lymphatic leukemia was made, we abandoned our diagnosis of syphilis, stopped the inunctions, and placed the patient on Fowler's solution in one drop doses, to be increased rapidly up to toleration. When the pain in the stomach has bothered him too severely, we have reduced the amount of arsenic, usually with good results. He has taken Fowler's solution nicely, with a reduction in the number of leucocytes to about fifteen thousand per cubic mm., and he seemed to feel better for a time, but the blood examinations have shown a steady progression of the disease rather than a recession, as can be seen by a reference to the table.

On March 10th we found a marked increase in the red cells, 6,864,000, with a diminution of the whites to 38,000. Two days later the reds were 5,352,000, and the whites 30,400. This was immediately after the high water mark in our flood of last spring, when the water was six inches above the floor in his house, and he had to move his family and household goods up-stairs. He was very indignant at the railroad companies because he thought that their embankments had helped to increase the flood. This served to

modify the count as above. In another week the reds had fallen to 4,744,000 and the whites to 18,666.

All this time the percentage of lymphocytes had consistently increased. During the time of the flood and its subsidence, the percentage of total lymphocytes was higher than at any time before or since, being about 90%. The polymorphonuclears were the lowest at this time that they have been, being 3.2%, 5.8% and 4.8% at different counts. The last of April he visited his brother in Port Huron, and had a cold when he returned. As we expected, the polymorphonuclears were increased and small lymphocytes were decreased at the next count.

Since May the lymphatic glands all over the body have been getting smaller and a little harder. The spleen has been somewhat enlarged and the liver markedly so. He has at times suffered from difficult breathing, probably due to the pressure of the glands in the neck, which have been enormously enlarged.

During this series of blood examintions, I have found occasional mormoblasts, poikilocytes have

Case I

	Red cells	Whites.	Ratio.	Hb.	Hb. Index.	Polymorphonuclears, %.	Small lymphocytes, %.	Large lymphocytes, %	Transitional, %.	Myelocytes, %.	Total lymphocytes, %.	Eosinophiles, %.	Mast cells, %.	Necrotic, %.
Feb. 20	3,610,000	65,500	1 to 55	90%	1.15	21.50	50.50	21.50	1.00	0.00	73.00	1.00	4.50	pres.
Feb. 24	.....	.....	.....	....	....	16.00	62.10	11.70	3.20	0.00	77.00	1.30	1.60	4.10
Mar. 4	4,068,000	68,000	1 to 58	90%	1.12	12.80	64.00	13.60	4.50	0.00	82.10	0.00	0.00	5.10
Mar. 10	6,864,000	38,000	1 to 181	90%	0.65	3.20	74.70	13.50	2.20	0.00	90.40	1.90	0.50	4.00
Mar. 12	5,352,000	30,400	1 to 176	90%	0.84	5.80	77.60	12.00	0.90	0.00	90.50	0.70	0.70	2.30
Mar. 17	4,744,000	18,666	1 to 255	90%	0.95	4.80	74.20	14.50	1.30	0.00	90.40	1.30	0.30	3.60
Mar. 25	5,176,000	17,328	1 to 299	90%	0.87	13.20	77.10	6.70	0.60	0.25	84.40	0.25	0.05	1.85
Apr. 2	4,664,000	19,000	1 to 245	90%	0.96	11.90	79.80	5.50	1.10	0.20	86.40	0.20	0.20	1.10
Apr. 10	4,448,000	16,800	1 to 264	90%	1.01	8.14	80.34	8.43	0.84	0.28	89.61	0.28	0.28	1.41
Apr. 19	3,392,000	13,777	1 to 247	90%	1.29	7.85	66.58	14.53	0.58	0.00	81.69	0.58	8.72	1.16
May 11	4,024,000	12,800	1 to 302	80%	0.99	15.66	70.05	7.99	1.37	0.00	79.41	1.64	0.00	3.29
May 20	4,216,000	19,133	1 to 215	80%	0.94	8.98	79.97	7.48	0.89	0.00	87.34	0.29	0.60	1.79
May 26	5,408,000	18,200	1 to 292	90%	0.83	15.61	78.04	4.45	0.32	0.00	82.81	0.95	0.00	0.63
June 4	3,808,000	20,280	1 to 188	90%	1.18	6.87	77.13	11.06	0.38	0.00	88.57	1.52	1.14	1.90
June 12	3,976,000	15,571	1 to 256	90%	1.13	14.02	79.37	3.17	0.26	0.00	82.80	0.53	0.00	2.65
June 20	4,274,400	11,920	1 to 358	80%	0.93	11.85	79.39	5.92	0.47	0.00	85.78	0.71	0.24	1.42
June 30	4,400,000	15,040	1 to 295	90%	1.02	11.25	77.95	6.84	1.10	0.00	85.89	0.88	0.44	1.54
July 10	3,005,600	18,240	1 to 164	90%	1.49	7.97	72.73	9.56	0.39	0.39	82.68	2.39	1.54	4.98
July 22	3,560,000	16,960	1 to 209	90%	1.26	10.91	76.57	7.27	2.05	0.00	85.89	1.36	0.25	1.59
Aug. 11	3,561,000	34,400	1 to 104	90%	1.25	14.10	76.94	4.61	0.77	0.00	82.34	0.51	0.00	3.07

Case II

July 6	4,032,000	8,840	1 to 456	90%	1.11	39.72	38.56	12.41	2.48	0.00	53.45	1.24	0.00	5.59
July 9	.....	.....	.....	90%	....	45.17	29.05	16.79	1.93	0.00	47.77	2.54	0.00	4.52
July 17	4,140,000	8,200	1 to 505	90%	1.09	49.00	28.00	21.00	0.00	0.00	49.00	2.00	0.00	pres.
July 23	3,912,000	15,200	1 to 257	90%	1.12	49.50	35.83	8.50	2.13	0.00	46.46	1.21	0.00	1.83
Aug. 1	3,220,800	6,355	1 to 506	90%	1.09	49.25	26.71	18.70	2.29	0.00	47.70	0.38	0.00	2.67
Aug. 10	4,024,000	8,320	1 to 483	90%	1.12	40.29	40.87	14.49	2.03	0.00	57.39	0.86	0.29	1.18
Aug. 17	3,171,400	336,000	1 to 9	90%	1.42	53.11	28.25	13.39	0.95	0.00	42.59	0.95	0.00	3.35

Case III

July 28	1,976,000	60,664	1 to 31	50%	1.20	2.73	15.91	76.82	0.91	0.00	93.64	0.00	0.00	3.63
July 30	1,236,400	61,600	1 to 20	30%	1.09	0.56	12.43	77.98	0.00	0.00	90.41	0.56	0.00	8.47
Aug. 2	904,000	17,820	1 to 53	30%	1.50	0.39	43.41	54.65	0.39	0.00	98.45	0.00	0.00	1.16

been present all the time, as well as polychromatophilia in varied degrees. A large number of shadow corpuscles and blood plates have also been present. There have been many cases in which the red cells seemed to have a hollow in one edge from which blood plates were streaming. Necrotic leucocytes are always present, and several leucocytes have been found in various stages of mitosis.

The urine in this case has been negative. The diazo reaction has been present at every examination, and sugar was found once in 0.2%. Other elements have been normal.

The patient is cachectic, but notwithstanding considerable indigestion and pain in the stomach, has lost only fifteen pounds in weight, from 165 to 150.

With the exception of the first few examinations of this patient's blood, I have been finding, regularly, short streptococci in the counting chamber, there being two to six cocci in each chain. These germs are motile and are probably of the salivarious group, gaining entrance to the blood stream through the lesions in the mouth. At first I paid no attention to these germs, supposing that I had contaminated my specimen, but later I found reference to these germs, and since then have noticed them particularly. I will have a few words to say about them under the head of etiology.

Case II. Chronic lymphatic leukemia of the atypical and mixed celled variety. Geo. S., aged 34. This patient's past history is negative, with the exception of two severe attacks of gonorrhea a number of years ago, and several years apart. With the first attack he had "soft chancres," but denies all secondaries. He has been twice married, and has one healthy child by his second wife, a girl about fourteen months old.

About a year and a half ago he began to feel tired, and could not get rested. He had frequent attacks of diarrhea and vomiting, and frequent nosebleed. These were unusual for him, and he consulted a "doctor," (a notorious quack). The nose bleed stopped bothering him after a few months. About six months ago he came to us for advice, with the diagnosis of tuberculosis of the bowel. We could find no evidence of tuberculosis other than his emaciation. He says he has lost twenty pounds in the last year and a half. The lungs and heart were normal, but he complained of great weakness. We advised him to spend most of his time out of doors—to secure out-of-door employment if possible.

July 6th he returned to us, when a blood count was made: Red cells, 4,032,000; white cells, 8,840; hemoglobin, 90%; the differential leucocyte count showed polymorphonuclears, including some very large, almost giant cells, and some with abnormally divided nuclei, 39,72%; small lymphocytes, 38.56%; large lymphocytes, 12.41%; transitional forms, 2.48%; eosinophiles, 1.24%, and necrotic cells, 5.59%. Many of the polymorphonuclears had six or seven lobes to the nucleus, and in others the lobes appeared swollen, still others were very small, hardly over 10 microns in diameter. The red cells were largely deficient in hemoglobin, with the exception of a considerable number of polychromatophilic ones. Normoblasts were rarely present. A few mitotic large lymphocytes, and on July 17th one eosinophile myelocyte were found. The urine was negative, the diazo reaction absent, and the tuberculin test negative.

His spleen was easily palpable, and the liver was slightly enlarged. The glands in the axillæ and groins, and a few in the neck were enlarged.

He complains that he is always tired, can hardly climb up-stairs, sleeps much of the time, and awakens as tired as when he went to sleep. He says he often has attacks of nausea and vomiting, and diarrhea coming on soon after a meal. When he goes to stool, his mouth waters, secreting nearly if not quite an ounce of saliva, then he has an uncontrollable desire to urinate, after which his bowels move, and he feels better until the next attack. He seems to dread these times at stool, because of the "drooling" as he calls it. He is a man of low mentality, and a highly nervous temperament. He may have self induced the above described condition.

From the abnormal polymorphonuclears present, together with the increase in the large and small lymphocytes, and from the physical and subjective findings, we believe this to be a case of mixed and atypical celled leukemia of the chronic lymphatic variety, probably just merging past the stage described by Emerson as sublymphemic pseudoleukemia.

Case III. Acute lymphatic leukemia. Helen S. Aged two years. The child's mother had noticed that for about two months, since the first of May, she had been losing in vitality, but was not ill. July 22, the child was taken sick, and Dr. W. H. Haughey called. He found the temperature 101°, pulse accelerated and weak, abdomen distended, and right cheek swollen. He

suspected autointoxication and treated her accordingly. The condition of the mouth soon attracted attention. The gums were red and inflamed and the teeth loose. The tonsils were not particularly noticeable, but upon examining the throat a membranous mass was coughed up on the tongue depressor. This mass was taken to the laboratory and examined for Klebs-Loeffler bacillus. The bacteriologist reported an extensive growth on the culture medium of short streptococci, only a few to a chain, but smears from the original mass gave several long chains.

The condition of the mouth kept getting worse, and took on a scorbutic tendency. There were glands distinctly palpable in the groins, one or two in the cervical region, but none in the axillæ. The spleen and liver were not palpable. Purpuric spots were just making their appearance on the trunk and legs. A blood count was made (see Table). This count showed a typical picture of acute lymphatic leukemia—red cells, 1,876,000; whites, 60,664; hemoglobin, 50%; large lymphocytes, 76.82%; small lyphocytes, 15.91%, and polymorphonuclears, 2.73%. The division into large and small lymphocytes in this case was particularly difficult because there was such a gradual gradation in size from the very small, 5 microns up to those of 15 microns and over, some being as large as 30 microns in diameter. I have tried in this case as well as in cases I and II to class all those lymphocytes under 10 microns in diameter as small lymphocytes, and those over 10 microns as large.

There were many poikilocytes present, as well as various sizes of red cells; a large number of polychromatophilic red cells, and an equally large number with only rings of hemoglobin. There were a few normoblasts, two megaloblasts with mitotic nuclei, and six large lymphocytes undergoing karyokinesis. Hydrops of nucleus was present in a few cases and some of the lymphocytes were vacuolated. On the day of death I found five large lymphocytes in the process of amitotic cell division. Blood plates were fairly numerous, and a few red cells appeared to have an opening in one edge, from which blood plates were streaming. It was noticeable that the number of red cells progressed steadily downward, and that the number of white cells dropped just before death. This corresponds to the findings of Emerson, McCrea, Forbes and Langmead, and others.

In my examination of this blood, in making the red and white cell counts, I found quite a few short streptococci, only a few germs to a chain. These were freely movable, and were present at each count.

The urine chemically was negative, but microscopically there were many cylindroids, no casts, bacilli (colon?), several triple phosphate crystals, some squamous and columnar epithelial cells, a few leucocytes and red blood cells.

The case history from day to day was as follows:

June 22. Temperature 101°, pulse accelerated, respiration dry, right cheek swollen, abdomen distended, full and gaseous, constipated, child quite restless.

July 23. Temperature 101.6°. Good result from castor oil.

July 24. Temperature 104°. Gave calomel,—swelling in the cheek lessened.

July 25. Temperature 103°. Good results from the calomel.

July 26. Temperature 102.5°. Distention much less.

July 27. Temperature 103°. No improvement,—breath foul.

July 28. Temperature, morning 102.5°, evening 104°. There was an ulcer between the right cheek and the upper jaw. Culture examined for Klebs-Loeffler bacillus, but only short streptococci found. Purpuric spots on the body and legs, glands in the groins and cervical region. Blood count in the evening, as above. Diagnosis of acute lymphatic leukemia.

July 29. Temperature, A. M. 103°, P. M. 103.5°. Child very peevish and fretful. Ulcer on the gum dressed with hydrogen peroxide. Fowler's solution internally. Purpuric spots on the knee. Breath offensive.

July 30. Temperature A. M. 102.5°, P. M. 102.7°, pulse 120, respiration 28. Child rested better. More purpuric spots on elbow. Second blood count.

July 31. Temperature A. M. 101°, P. M. 100°, respiration 26, pulse 120. Considerable hemorrhage from the mouth during the day. Had a restless night.

Aug. 1. Temperature A. M. 101°, P. M. 104°, respiration 23, pulse 140. Removed a large slough from the gums. More purpuric spots, and hemorrhagic oozing from the mouth. Child got up and went into the kitchen where nurse was preparing some food for her, and fell in a heap on the floor.

Aug. 2. Temperature A. M. 103°, respiration 72, pulse 169. Blood count made at 11 A. M. Child very restless and died at 4:30 P. M.

The child lay in its bed during the last few days and would not raise hand or foot,—it seemed completely prostrated, and was almost transparent. No autopsy was obtained.

The neighbors say the playyard of this child was a small area fenced off in the back yard, in which were barn yard, chicken coop, and garbage can.

Etiology.

The causative factor in lymphatic leukemia is unknown, but has been the subject of much speculation. It was early thought to be a tumor formation in the glands and spleen. It was supposed that the lymphatic cells from these enlarged glands found their way into the blood to produce the typical blood picture. Of recent years this idea of the cause of lymphatic leukemia has been modified along two lines. Many investigators, among them McCrea, Neumann, Treadgold, Emerson, believe the disease to be a malignant growth in the bone marrow, with metastases in the glands, spleen, liver, kidneys, etc. They claim that the growth in the bone-marrow is hemmed in on all sides by hard, bony tissue, and so is necessarily limited in expansion, and after a time the new formed cells work their way through the endothelial lining of the blood and lymph vessels, thus finding their way into these streams. Thus they account for conditions which clinically and pathologically resemble lymphatic leukemia, but do not have the typical blood picture. They say this blood picture will come later. As supporting this view, Warthin, Dock and Treadgold have reported several cases of chloroma with leukemia. Treadgold in his recent report of four cases says he believes lymphatic leukemia to be due to a diseased condition of the bone marrow, but that the glands and spleen very often cannot be excluded as the seat of primary disease.

This statement of Treadgold's leads to another outgrowth of the original theory. Many believe the condition to be due to disease of any of the blood forming organs, whether bone marrow, lymph glands, or spleen. Forbes and Langmead in a lengthy paper read before the Royal Society of Medicine of London, April 10, 1908, sum up the various theories and give their support to the malignant growth theory, but believe that this growth may be in any of the adenoid tissues. Personally, I accept this theory, believing that the disease is due to a malignant change in the blood-forming cell of these blood-forming organs. I believe the progenitors of the red as well as the white cells are affected. I cannot localize the condition in one set of organs to the exclusion of another, for as yet I have had no opportunity of studying this disease post-mortem. My reason for adhering to the malignancy theory is the appearance at times, if not constantly, of mitotic figures in the blood cells, both red and white. I found a few mitotic figures in the large lymphocytes of each of these cases,—rarely in cases I and II, but more frequently in case III, in which case I also found some amitotic figures among the large lymphocytes, and several mitotic megalocytes. In case I there were a few red cells with mitotic nuclei.

Frederick Taylor, in the "Transactions of the Clinical Society of London, 1904," advances the idea that lymphatic leukemia has its primary seat in the thymus gland, which he found enlarged in several cases. This view is not adopted by others so far as I know.

Another theory has been receiving considerable attention; the microbic theory. The supporters of this theory point to the many features that resemble infectious diseases; as, the hemorrhages that resemble those of infectious fevers. In the acute forms of the disease there is a septic temperature curve.

Löwit a few years ago described an hemamoebum as the cause of leukemia, the one causing lymphatic leukemia being a small intranuclear organism taking a peculiar stain. He published a lot of work on this subject, and presented numerous drawings. Fürst, Dock, and others reviewed Löwit's work and concluded that the forms he described were caused by artefacts due to his peculiar method of staining. This work has so few supporters that it is almost impossible to find a reference to it in the current English literature.

Pincus, Holst and others have recently advanced the idea that a short streptococcus may be the cause of this disease. They report cases showing the presence of these germs, and refer to one case reported by Obrastzow, of a nurse who nursed a fatal case and then contracted the disease. Emerson questions whether "all our cases of acute lymphatic leukemia may not some day be shown to be due to infection." Forbes and Langmead report four cases in which they have found the short streptococcus. But in their cases the germs were found in three instances post-mortem, and in one just an hour before death. As mentioned in my case reports, I have found short streptococci in all three cases. I do not believe, however, that they have a causative relation to the disease in these cases, else cases I and II would have had a more or less septic fever, which they have enirely escaped. I believe these germs are of a benign salivarious group, gaining entrance through the damaged mucosa of the mouth, and while they are interesting as lending a possible support to the infection theory, I doubt their causative relation and consider them more in the light of a secondary infection.

Schupfer injected the blood from a case of acute lymphatic leukemia into several cancer cases, and since he secured no reaction, drew the conclusion that leukemia is not due to an infection with a streptococcus.

The prognosis of lymphatic leukemia is bad. J. F. Dickson in London *Lancet* for August 19, 1906, reports one case of "subacute lymphatic leukemia" in a man of twenty-four years as "completely cured in two months' time under the administration of liquor arsenicalis, five to fifteen drops; Grawitz in *Berliner klinische Wochenschrift,* June 15, 1908, reports one case as cured for two years by the use of Roentgen-ray; but of fifteen cases treated the others are either dead of recurrence or unimproved. Mosse in the same journal, for June 29, 1908, reports one case of lymphatic leukemia in which the blood returned to a histological condition under Roentgen treatment, but the patient died about a year and a half later of cirrhosis of the liver, probably caused by the treatment. He claims this is "the first case to give histological findings in the blood."

These are the only cases I have been able to find in the recent literature reported as cured, but I have found any number of authors who say the disease is invariably fatal. The acute form may prove fatal in four days, or may extend to three or four months. Emerson reports three cases of respectively eight, three and five weeks' duration. Forbes and Langmead report twelve cases ranging from one week to seven months, but averaging seven weeks. Our case III ran twelve days.

The chronic form of the disease may run anywhere from a few months to three years. Osler reports one case in which the leukemia lasted between eleven and twelve years, but says the longest of his clinical cases was three years. Dr. Nelson of the Battle Creek Sanitarium tells me of a case they have had under observation seven years.

In our present knowledge of the disease the treatment of lymphatic leukemia resolves itself into an expectant treat-

ment, meeting conditions as they arrive, and a treatment directed against the disease process. Many remedies have been tried, but only two have met with any measure of success,—arsenic and the Roentgen ray. The treatment of leukemia theoretically should be directed to a destruction of the diseased and abnormal cells found in the blood, and to the inhibition of their production. It has been found that both arsenic and the Roentgen ray have this selective action to a degree; that is, they tend to destroy the lymphocytes and other abnormal cells circulating in the blood, and they also delay the formation of these cells.

Warthin, in *International Clinics,* Vol. IV, 1907, discusses the treatment of leukemia by arsenic and the Roentgen ray, and points out the effects and advantages of each. He also points out the dangers from each, which are great. Neither remedy will uniformly have the desired effect, especially in lymphatic leukemia. From arsenic there is always the danger of arsenical poisoning, and from the ray there is danger of intense intoxication, of which the patient dies in a day or two. Warthin favors the alternate use of these two remedies, but states that the benefits are variable and not very marked. He says there may occasionally be a return to the normal, or nearly so, in the condition of the blood, but this is only a passing condition.

Maragliano, of Naples, has also studied the use of the Roentgen ray in leukemia, and has reached about the same conclusion, namely, that in lymphatic leukemia the benefits are too evanescent and variable to warrant its use.

Schirmer, of Jena, says the results of Roentgen treatment are variable and not usually good.

The three cases reported in this paper occurred in our practice in the short period of six months.

Disinfectants.—Kedzie, of the Agricultural College, Lansing, says that formaldehyde was first prepared for disinfectant purposes by securing the partial oxidation of wood alcohol by bringing its vapor in contact wath warm platinized asbestos. The difficulties encountered which caused this method to be abandoned were: Danger from fire and low per cent yield of formaldehyde vapor, much of the alcohol being vaporized unchanged.

Among simple apparatus to be found on sale at druggists we now have the paraformaldehyde vaporizers which yield formaldehyde vapor and with comparative safety from danger from fire on account of the construction of the vaporizer.

Paraform (paraformaldehyde, the solid) is, however, much more expensive than formalin (formaldehyde, the liquid 40 per cent solution) and the amount which the householder would be called upon to expend in order to disinfect his premises makes its use appear inadvisable.

Lately there has been suggested and brought into use the method for liberation of formaldehyde vapor from the commercial 40 per cent solution by utilizing the heat evolved when solid potassium permanganate crystals are brought into contact with the solution in an open dish. (A mixture of the two materials in a glass retort exhibited the violence of the reaction.) The principal advantage of this method is the entire absence of danger from fire; the disadvantage of the method is a serious one, as ordinarily carried out only about 40 per cent of the quantity of formaldehyde contained in the formalin solution is converted into vapor and expelled from the liquid by the heat produced by the oxidizing action of the potassium permanganate on the formaldehyde present in the liquid.—*Public Health.*

SOME OBSERVATIONS ON THE ETIOLOGY AND TREATMENT OF NASAL CATARRH*

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Battle Creek.

The etiology and treatment of catarrhal inflammations of the nasal passages are of interest to the general practitioner, first, on account of the great prevalence of these affections, and second, because inflammations and obstructive lesions of the nasal passages often give rise to more serious extranasal diseases. The well known fact that a large majority of the suppurations of the middle ear and mastoid process originate in comparatively simple inflammations of the nasal mucosa should elicit the interest of the general practitioner particularly in the causes and treatment of nasal inflammations. The relation of infectious post-nasal droppings to infections of the alimentary tract is of sufficient importance to receive the careful attention of the internist. The entire metabolism of the body may doubtless be hampered by obstructive lesions in the nose which interfere with the proper intake of oxygen, which is the most essential element in every bodily function. Oxygen is not only necessary for every manifestation of energy in the body, but it performs a very important service in burning up the waste products of metabolism, reducing them to innocuous end-products. As arterio-sclerosis and nearly all chronic diseases are due to improperly oxidized waste products, which incite inflammations and degeneration in the arteries and various organs of the body, may it not be that hampered respiration is an important factor in many chronic diseases? A familiar illustration of hampered metabolism may be seen in the child with adenoid vegetations, and a similar condition is often observed in adults with obstructive lesions in the nasal passages. These important relations between nasal catarrh and general diseases should be recognized by the general practitioner and elicit his interest in catarrhal affections of the nose.

In this paper the author gives some practical deductions from his own experience in dealing with about eight thousand cases during the past eleven years, rather than a survey of the literature bearing on the subject.

The exciting factor in nearly every inflammation of the nasal mucosa is bacterial infection. Even though the immediate extent may be a chemical, thermal or traumatic irritation, it is the product of bacterial growth which causes the reaction in the tissues which we call inflammation. Could bacteria be excluded traumatism and other forms of irritation would usually produce but simple and transient inflammatory reactions.

Reasoning deductively from this fact, it would seem that the most essential factor in the treatment of catrrhal inflammations would be antiseptic applications, and it was this germ theory of catarrh that led to and developed the "spray specialist" of a decade or two ago. The inventiveness and ingenuity of this class of rhinologists, to which the author belonged for some years, were mainly taxed in discovering antiseptics which were effective germicides and at

*Read at the Second Annual Meeting of the Third Councilor District, Battle Creek, October 6, 1908.

the same time not irritants to the mucous membrane. These medicaments were applied as vapors, nebulæ, sprays, douches, or on cotton applicators. Antiseptics still occupy an important place in the therapy of catarrh, especially the acute forms of inflammation, but in the author's experience sprays alone are of very transient benefit in the great majority of chronic ailments of the nose and throat, and it is the permanent relief of these chronic affections to which this paper is principally devoted.

The nasal mucosa is continually exposed to many forms of bacteria which are capable under favorable circumstances, of exciting and maintaining chronic inflammations. These germs cannot be excluded or exterminated. They are ever present in normal noses and the rhinologist, as well as the dermatologist, is at present paying more attention to the predisposing causes of mucous membrane and skin inflammations than to the exclusion or extermination of the microbe. There is no greater barrier to microbic infection than normal bodily resistance. When a person dies his resistance to infection is also abolished, and the ever present mcirobe at once enters the pores of his skin and mucous membranes, and in due time affects the dissolution of his tissues. There are many factors which lessen general resistance to infection, as well as local resistance to infection. The very marked advances which have been made during the last decade in the treatment of chronic catarrhal affections of the nose and its accessory cavities are based on a fuller appreciation of the predisposing causes which lower the resistance of the tissues to infection.

The predisposing causes of catarrh are either extranasal or intranasal. Of the extranasal factors, age, sex, occupation, clothing and climatic conditions require attention, but will not be discussed in this brief paper. The principal extranasal cause of catarrh, in fact the most important of all causes, is auto-intoxication. The accumulation within the blood and tissues of effete products of putrefaction and improperly oxidized end products of metabolism throws extra work on the kidneys, skin and other excretory organs, and the mucous membranes of the nose doubtless vicariously becomes execretory in character as well as secretory.

In the treatment therefore of chronic rhinitis, our first attention should be given to the patient's general condition, and the causes of autointoxication carefully looked into. Overeating, especially of nitrogenous food, improper mastication, and sendentary habits, are the most important factors in chronic blood poisoning. But our attention should be directed not merely to the alimentary tract. Chronic autointoxication may have its origin in submerged, diseased tonsils as well as in the colon. The tonsils are much more commonly a source of autointoxication than is generally supposed. When they contain poorly drained, infected crypts, which are not permanently relieved by local applications they should be thoroughly removed.

I have but briefly considered the extranasal, predisposing causes of catarrh. These are no doubt the most important of all factors to be considered in the treatment. But as that part of the treatment is complex and pertains to general medicine, its discussion does not come properly within the scope of this paper, and the remainder of the paper will be devoted to a consideration of the intranasal, predisposing causes, and the intranasal treatment from the rhinologist's point of view.

The nasal chambers are not merely a pair of openings into the naso-pharynx. The mucous membrane lining the nasal passages and covering the turbinal bodies and septum, if spread out, would cover an area of about twenty-two square inches. The nasal passages are

two extensive fissures between the entire septum and the turbinates, between the several adjacent turbinates, and between the side walls of the nose and lateral wall of the turbinates.

In the ideally constructed nose the opposing walls of these extensive fissures are at no point widely separated from each other, and at no point firmly in contact. This gives ample surface for warming, moistening and purifying the inspired current of air, and perfect ventilation and drainage is afforded in the entire respiratory fissure. Into these fissures the accessory cavities of the nose drain principally into the middle meatus, and less into the superior. The outlets of these sinuses are guarded mainly by the middle turbinate, but their openings under normal conditions are unobstructed. Ventilation and free drainage of the entire nasal chambers and accessory cavities are essentials to healthy mucous membranes. Retained secretions and isolated chambers or areas not accessible to the air currents are much more subject to bacterial invasions and consequent catarrhal inflammation. There is probably no medicinal antiseptic so effectual in restricting many forms of infection and catarrhal inflammation as pure air. This is particularly true of the anærobic infections of the accessory cavities which are so productive of the foul breath. While in Dr. Halle's clinic in Berlin, in 1906, I observed that his sole treatment of many of the milder forms of empyema of the accessory sinuses was to effect a sufficient intranasal opening into the diseased sinus and treat it daily with merely an air douche, nothing more, and many of his cases were thus cured without the usual radical obliteration of the sinus.

Any malformation of the nasal structures which either brings into firm contact opposing mucous membrane surfaces, or which widely separates these surfaces at any point, predisposes to inflammation. Firm points of contact on the one hand interfere with the free circulation of the parts, tend to produce stasis and edematous swellings and thus predispose to chronic inflammations. Often pressure upon sensitive nerves in the septum causes reflex headaches. These points of contact also may interfere with the free drainage and ventilation of some part of the nasal respiratory fissure, or of an accessory cavity. On the other hand, widely separated areas of opposing mucous membranes have a tendency to crust formation and the tempering of the air current is thus markedly diminished, which is likely to result in dry pharyngitis and laryngitis. By far the most important intranasal causes of catarrh are the above malformations and their correction by rational methods has yielded brilliant results in many forms of chronic rhinitis for which formerly but little was accomplished.

Deformities which interfere with ventilation and drainage may be in the septum or the turbinates. Doubtless the most common deformity met with is a deflected septum, which may be in contact with one or two turbinates on one side and there may be too wide a respiratory fissure on the other side. Much has been written about the etiology of septal deflections, some claiming traumatism as the principal factor, others faulty development. In the author's cases traumatism has been the cause in a few instances where the deflection was mainly anterior affecting mostly the cartilage of the septum. But faulty development appears to be the principal cause. Adenoids in children, if not removed sufficiently early, often cause a high arched palate. This affords a limited space for the development of the septum above it and it consequently pushes to one side, more often the left side.

In septal deflections it is often possible to obtain sufficient breathing space

on the obstructed side by a removal of a part or all of the inferior turbinal body with which it is in contact, but the results of this form of treatment are often disappointing. A sufficient breathing space may be obtained on the obstructed side, but a very important functional tissue has been hopelessly destroyed. The inspired air current is then mainly through the inferior meatus, whereas normally it should be mainly in the middle meatus. The middle meatus remains obstructed and the discharges from the attic of the nose fall into the larger air passages below, where they dry into crusts. It is unfortunate that inferior turbinectomy is so simple an operation that the beginner in rhinology can readily effect its removal. On this account many turbinates are no doubt sacrificed which would be saved were it so simple a matter to straighten the septum.

By the modern submucous window resection of the septum it is possible to effectively and permanently straighten any septum, no matter how badly deformed, and usually preserve all of the covering mucosa. In this way none of the actively functional mucosa is destroyed, no wide openings are made in the air passages, and often an abnormally large passage on the concave side of the septum is advantageously narrowed. The author has performed this operation about 135 times during the past three and one-half years with very gratifying results. In every case the septum was effectively and permanently straightened, and he has had to record no undesirable results except four or five small perforations which gave the patients no unpleasant symptoms.

There is no doubt but that a nasal obstruction due to a septal deflection, would always be better relieved by correcting the septal deformity than by removal of a turbinate, and the only objection to the septal operation is the difficulty in its performance and the time required for it. However, this operation has been performed by the author in every case under local anesthesia with very little complaint of pain from the patients. Next in importance to septal deflections are enlargements of the middle turbinal body. This body is not so well supplied with erectile tissue as the inferior turbinate, and when it is enlarged it is often due to malformations of its bony skeleton rather than to its soft parts as is the case with the inferior turbinate. These enlargements of the middle turbinate are due either to the bone being bent on itself in such a way as to make it occupy too much space, or the bone may contain a large cell similar in every way to an ethmoidal cell. An obstruction in the middle meatus due to such a deformity can obviously be removed only by a partial removal of the middle turbinate. Obstructions in this part of the nasal passages are especially productive of catarrhal affections of the nose and sinuses. For the turbinate, which is the natural guardian of the sinus outlets, becomes an obstruction to them, interfering with the ventilation and drainage not only of the sinuses but of the upper portions of the nasal passages, which are the normal pathway of the main current of inspired air. A removal of a portion of the middle turbinate also often affords relief from frontal, temporal and occipital headaches of reflex origin. The naso-palatine nerve lies in the membrane covering the septum at about the junction of the vomer and perpendicular plate of the ethmoid and it is here that the crest of most septal deflections is located and also the point where the middle turbinate most often impinges upon the septum. Pressure of the turbinate upon the trunk of this sensitive nerve accounts for the reflex disturbance.

Third in importance of nasal ob-

structions is hypertrophy of the inferior turbinates. In all forms of nasal stenosis this body is apt to be engorged, but this turgesence is more often due to some adjacent structure pressing upon it such as the middle turbinate or the septum, and when this pressure is removed, and normal respiration secured through the middle meatus the inferior turbinate often assumes its normal size without operation upon it. Enlargements of the inferior turbinate are more often due to turgesence or hypertrophy of its soft parts rather than to deformities of its bone. Its enlargement has less pernicious effect upon ventilation and drainage than middle turbinate enlargements. In chronic turgescence, or hypertrophic rhinitis, it often becomes markedly enlarged at its posterior end filling up the posterior naris. Removal of the posterior end in this case often affords marked relief from nasal stenosis and catarrhal droppings into the throat, but the author seldom cuts away the body proper of the inferior turbinate.

The time allotted to this paper permits of only a very brief statement of the principles by which the author has been guided in the correction of intranasal deformities. It has been his aim to imitate nature by leaving the respiratory fissures as far as possible in normal form, with no firm points of contact between opposing mucous surfaces on the one hand, and no wide openings on the other, thereby securing drainage and ventilation in all parts, unobstructed circulation and avoidance of crust formation in widely separated regions or on projecting spurs. He believes that this principle, carefully studied and applied will lead to an avoidance of the too radical removal of important functional tissue which has in the past brought nasal surgery somewhat into dispute.

That the Egyptian medical student on leaving school does not think lightly of his future labors and holds in horror criticisms some of our American physicians rather court, is evidenced by the following quotation from the *Lancet* (London): "I swear, in the name of God the Most High, and of His sublime prophet, Mohammed, whose glory may God increase, to be faithful to the laws of honor, honesty, and benevolence in the practice of medicine. I will attend to the poor gratuitously and will never exact too high a fee for my work. Admitted into the privacy of a house, my eyes will not perceive what takes place; my tongue will guard the secrets confided to me. My art shall not serve to corrupt, nor to assist crime, and I will not yield, under any pretext of persuasion, to prescribing any poison to anyone. I will neither give nor prescribe to any pregnant woman poisonous drugs capable of provoking or producing an abortion. Ever respectful and grateful to my masters, I will hand on to their children the instructions which I have received from their fathers. May I be respected by men if I remain faithful to my vow. If not, may I be covered with shame and despised. God is witness to what I have said. The oath is finished."

The medical interests of the public are identical with the cardinal principles of medical organization. That is the reason physicians stand for the public health defense, for pure food, pure drugs and pure medical practice. Any political aspirant whose record shows opposition to such measures is an enemy not only to the highest interests of the people, but to the medical profession. The medical profession, in taking an active interest in the present campaign, does not enter politics by advocating a candidate, but defends the principles of its organization by defeating the enemy of medical standards.—*Ohio State Medical Journal.*

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JANUARY

Editorial

The fourth great work which has been undertaken by the American Medical Association is the enlightenment of the public on those essential principles of medicine which relate to sanitation and the preservation of public health. It is only within recent years—since the beginning of the new era in medicine—that our profession has awakened to the sense of duty toward our fellowmen, and gradually the idea has become universally recognized by physicians that they owe it to humanity to take the lead in questions of public health. If they do not lead, others will, and public sentiment will become awry. What mean the astonishing growth of Eddyism, the rapid spread of osteopathy and the pernicious activity of so-called optometry? Is it not that these various forms of quackery are welcomed by the public, because the medical profession has failed to supply a certain need? Why has the Emmanuel movement taken the country by storm? Its principles are not new, for every true physician has employed them since the time of the Great Physician; it remained, however, for Rev. Worcester and others to exploit these principles in great popular papers, as in the *Ladies' Home Journal,* and in immense lecture halls, until the thing has become a fad. The good that is in it is in danger of being lost, of being buried under the mass of nonsense which the half-informed followers of Worcester are putting forth in speech and in print. Is not the rapid spread of these cults and systems, good and bad, due to the fact that we have failed to take our rightful position, as leaders and as teachers?

It is a somewhat curious fact that many people who are intelligent and possessed of keen judgment on almost all other subjects, seem to lack ordinary common sense when they come to consider medical questions. One reason for this may be, that the profession has, for years, carried with it an indefinable something, the mystery of which the laity feel it impossible to penetrate. Hence, they follow blindly any leader who may set himself up as such.

The time has come to change all this. The public is ready, as never before, to be instructed and it remains for us to furnish the instruction. In 1906, the Board of Public Instruction of the A. M. A. was formed, and it has been recommended that this board furnish a schedule of lectures and material for them to the various county societies, the lecture-talks to be given by the local physicians. Similar courses have been given with great success in Boston, by the members of the faculty of the Harvard Medical School; in Chicago, by the Chicago Medical Society, and in other cities.

The necessity of educating the public is thus stated by Pepper in an address delivered in Cleveland, in 1894: "It seems evident that to secure a broad, popular recognition of the paramount claims of hygiene and preventive medicine, there must be prosecuted vigorously, an education of the entire community, and there must be exhibited, on the part of physicians, a still higher conception of our duty as public spirited and distinguished citizens."

An amusing contrast of the extremes to which enthusiasm for hobbies in surgery can go is afforded by a comparison of two addresses given before the Wayne County Society in the past two years. Some eighteen months ago, Dr. R. L. Morris, of New York, spent an hour telling us of the ravages caused by minute adhesions about the gall bladder, liver, and other organs of the upper abdomen. It was a pleasant address to hear, for the subject was treated in a somewhat poetic vein and expressions such as "there are cobwebs in the attic of the abdomen" rather appealed to the imagination. It seemed so simple to cure our patients who suffer from diverse pains and aches in the epigastrium, by sweeping away the cobwebs from the garret, that we were duly impressed, and were serenely happy in the assurance that the problem had been solved. Just lately, however, we were cruelly awakened from our serenity by Dr. Gant, also from the Post-Graduate School in New York, who told us that the way to cure the ills of the body, abdominally speaking, is to imitate the lowly but industrious spider, and weave a few cobwebs, not only in the attic, but also, if you please, in the cellar or the subcellar as well.

The lack of poetic fancy in this latter address was somewhat compensated by the multiplicity of amazing and wonderfully formed compound words which would have delighted the ears of Achilles Rose and other exponents of purity in medical nomenclature. According to Dr. Gant, if we properly translated these numerous Greek expressions, any portion of the large intestine which becomes too prominent, may simply be wadded up and tucked away in some unused corner of the attic or cellar, or if the transverse colon offend by sagging down a bit, it may be hitched up by a loop of rectus muscle passed through the messentery and around the intestine. There are also other ways too numerous to mention, of out-spidering the spider.

The enumeration and description of such plastic operations is interesting, but the auditors would have been better able to judge of the utility of the procedures, had the essayist reported the results of his 78 cases in detail, instead of saying that "he had not found time to look them up, but that in general the condition of the patients, after further treatment (in some cases) by means of hydrotherapy, massage, galvanism, etc., was satisfactory."

And yet it is the enthusiast, working at his hobbies, who often blazes the trail in scientific work, and we of the Wayne County Society are fortunate to have it presented to us first hand.

♣ ♣ ♣

The recent epidemic of foot-and-mouth disease among cattle in Wayne county, has been serious enough to attract federal attention and result in local and foreign quarantine, besides visiting a well-known manufacturing drug firm with accusations of its inception. The etiology of the disease is not yet determined, although much work has been done. If it is a micro-organism, it has successfully resisted detection and is too small to be retained in the finest Berkefeld filter. The first description of the symptom complex was made by von Valentine in 1695, and epidemics of it have occurred at frequent intervals in Europe, causing great losses. England has remained free from it since 1892, by means of rigid laws limiting the importation of cattle.

Other terms used synonymously with foot-and-mouth disease are, hoof and mouth disease, epizootic, or aphthæ epizooticæ, aphthous fever, epidemic stomatitis, vesicular aphtha; murrain is a vernacular term for it. The French equivalent is fiévre aphthause, and the German is Maul-und-Klauenseuche. The Italians, Hungarians, Hindus, and other

Asiatics have distinct names for the condition and see it in its endemic form. It is not prevalent in the United States or Canada, and outbreaks hitherto have always been traced to imported cattle, and have mostly been in the east. The last epidemic was in Massachusetts, 1903. Not only cattle, but also sheep, swine, goats, horses, dogs, rabbits, deer, and fowls, are susceptible, and the fact that human beings contract it explains its inclusion in medical treatises.

The infection spreads very rapidly, by means of contact, or by the excreta, stalls, troughs, etc.; it has been known to develop in cattle driven over a road recently traversed by infected animals; the milk is often infectious, but not the flesh. Its occurrence in human beings has often been traced to milk; it is also contracted by inoculating into open wounds on cutaneous or membranous surface. The virus is destroyed by temperature of 60° C. and by drying; it thrives in moisture. In cattle the incubation period is from two to eight days. The lesions consist, first of vesicles, typically in the oral cavity and just above the hoof, also in the esophagus and trachea, and on the udders; secondly, the vesicles may progress to ulceration, with secondary infection and pyemia. Gastro-enteritis, hemorrhagic and degenerative changes in the viscera, pulmonary edema, myocarditis, and dilatation, are sometimes observed at autopsy. The foot lesions are especially liable to pyogenic infection, with deep suppuration, and necrosis of bone.

Foot-and-mouth disease is not dreaded so much on account of its mortality (only 2 to 8%) as its rapid spreading, the severe emaciation, the spoiling of dairy products and market value. Epidemics therefore always result in serious financial losses to cattle owners.

The symptoms in cattle begin with fever, anorexia, roughened coat, nausea, and salivation. The oral mucosa is reddened and vesicles appear from the third to the fifth day; they may reach the size of a silver dollar. The foot lesions begin with swelling, soreness and lameness, followed by vesicles, ulcers, and sloughing. Mastication and deglutition are painful and difficult, emaciation rapid, the milk decreased in quantity, and altered in quality. The teats may be infected. Acute pulmonary complications and apoplexy occasionally occur. The disease runs a course of two or three weeks, tending to complete recovery. Other animals than neat-cattle are affected chiefly in the feet, and usually are not so ill.

In man the disease commences with fever and sometimes a chill, anorexia, malaise, diffuse pains, headache, and nausea. If the infection starts in the mouth, as is most often the case from milk contagion, there is first a hyperemia, swelling, and sensation of dryness, followed by the vesicles. The lesions may be distributed to other parts of the body by the fingers. Abrasions and hangnails often become inoculated. There is salivation, and dysphagia, sometimes rhinorrhea, conjunctivitis, swollen lymph glands, colic, diarrhea, and bloody stools. Uncomplicated cases run a mild course, with few symptoms, and recover in eight to fifteen days. Infants are more seriously affected.

Cattle are not immunized by the disease against recurrence, although they develop a temporary immunity in the course of the infection. Artificial immunization has not been placed on a practical basis. The treatment of animals has resolved itself chiefly into prophylactic measures. Rigid isolation of exposed animals is enforced, and ruthless slaughter of those infected; no cattle are allowed to be removed from a locality where the contagion exists, and all dairy products are condemned. Milk is sterilized by heating to boiling point, but it should not be used at all. All excreta

should be destroyed; stables, appurtenances, utensils, etc., are disinfected. The disease in man is treated by isolation and the alleviation of symptoms; cleansing mouth washes are used, silver nitrate to ulcers, and diet and medication to promote nutrition, elimination, and comfort.

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Details of the epidemic in Michigan are in brief as follows: It was first noticed in Elm, Wayne county; the source of the infection is not as yet stated, but it is probable that the investigation in progress will reveal it. Lavonia township in Wayne, and Oakland township, in Oakland, were the localities affected, and there was a total of over 240 cattle afflicted, every one of which was killed. No other animals and no human beings are known to have contracted the disease. The work of quarantine, slaughter, and disinfection was carried out jointly by federal and state officials. Expert appraisers, one for the government and one for the state, placed valuation upon all slaughtered cattle, and the cost was paid, two-thirds by the national and one-third by the state treasury. While the disease was in progress, no cattle, sheep, or swine, could be shipped out of the state, and no fodder, hides, manure, etc., without thorough disinfection.

At present writing the epidemic has ceased, and there is not a case left. The premises that were frequented by the infected cattle are still under quarantine, but shipments out of the state have been resumed. In the premises that were infected, all old woodwork was torn out and burned; all manure and other refuse was similarly disposed of, while the immovable property was thoroughly saturated with disinfecting solutions of lime wash and carbolic acid, or cresol. Clothing, blankets, etc., were fumigated.

The first cases noticed gave the disease to neighboring cattle that broke their confines. The contagion was next spread by a man who casually examined some of an infected herd and then carried it to his own. There has been no scientific investigation to determine the nature of the contagion in this epidemic. Before quarantine was established, the infection was carried to Buffalo and thence to localities in Pennsylvania, thence to Maryland. Prompt measures have been taken in each instance to limit the further extension of the disease.

It is thus seen that prophylaxis is again in this disease, as in so many others, the chief therapeutic reliance. Efficient prophylaxis depends upon prompt diagnosis and notification of the authorities. A knowledge of the disease, its symptoms, and its dire consequences, is the chief asset of future battles with the disease, and the proper dissemination of this knowledge should be the aim of every agent of education in the branches of medicine, agriculture, and the Bureau of Animal Industry.

Book Notices

Gynecology and Abdominal Surgery. In two large octavos. Edited by Howard A. Kelly, M. D., Professor of Gynecologic Surgery at Johns Hopkins University; and Charles P. Noble, M. D., Clinical Professor of Gynecology at the Woman's Medical College, Philadelphia. Large octavo volume of 862 pages, with 475 original illustrations by Mr. Hermann Becker and Mr. Max Brodel. Philadelphia and London: W. B. Saunders Company, 1908. Per volume: Cloth, $8.00 net; Half Morocco, $9.50 net.

The second volume of this work, of which the first appeared a year ago, is a repetition of its excellencies. Written by able men, edited by a master-hand, and published in an elaborate treatise, it is not a student's work, but preeminently the surgeon's—his, more than the general practitioner's. Pathology, treatment, surgical technic, are described with indefatigable detail, aided by irreproachable pictures, but diagnosis, the interpretation of symptoms, the classing of conditions according to clinical manifestations,—these are of minor importance in the arrangement of the work, and occupy little space.

The chapters are as follows:

Complications following Operations, by Dr. G. Brown Miller; Cesarean Section and Porro-Cesarean Section, by J. F. W. Ross, M. D.; Operations During Pregnancy, by Ricahrd C. Norris, M. D.; The Operative Treatment of Sepsis in the Child-Bearing Period, by Barton Cooke Hirst, M. D.; Extrauterine Pregnancy, by J. Whitridge Williams, M. D.; Diseases of the Female Breast, by J. C. Bloodgood, M. D.; Operations upon the Gall-Bladder, Bile-Ducts, and Liver, by Albert J. Ochsner, M. D.; Operations Upon the Stomach, by B. G. A. Moynihan, F. R. C. S.; Pyloroplasty, by J. M. F. Finney, M. D.; Intestinal Surgery, by John B. Murphy, M. D.; Operations for the Diseases of the Vermiform Appendix, by Howard A. Kelly, M. D., and Elizabeth Hurdon, M. D.; Surgery of the Pancreas, by Eugene L. Opie, M. D.; Surgical Treatment of the Diseases of the Pancreas, by Stephen H. Watts, M. D.; Operations Upon the Spleen, by Howard A. Kelly, M. D.; Tuberculosis of the Peritoneum, by George Ben Johnston, M. D.; Penetrating Wounds of the Abdomen, by Floyd W. McRea, M. D.; Hernia, by Guy L. Hunner, M. D.; Operations for Inguinal Hernia in Men, by Edward Martin, M. D.; The Use of Drainage in Abdominal and Pelvic Surgery, by Brooke M. Anspach, M. D.; The Surgery of the Ureter, by Howard A. Kelly, M. D.; Surgery of the Kidney, by Charles P. Noble, M. D., and Brooke P. Anspach, M. D.

The chapter on the breast is conspicuous for its up-to-date, scientific, presentation of mammary pathology; the author has worked out a good classification, and illustrated it by a wealth of reproductions of gross and microscopic preparations. The description of gastric surgery is similarly good, and the enthusiast over gastric analysis will be suitably cooled by reading Moynihan's conservative opinion of it. Murphy's article on intestinal surgery is thorough, though somewhat familiar. Surgery of the ureter is worth reading.

Helpful bibliography is appended to many chapters, making it easy for one who wishes to consult original sources. The two volumes complete a work of reference that is remarkably good, and should not be overlooked by any one who desires a real knowledge of gynecology and abdominal surgery.

A Text-Book of Operative Surgery. Covering the Surgical Anatomy and Operative Technic Involved in the Operations of General Surgery. Written for Students and Practitioners. By Warren Stone Bickham, Phar. M., M. D. Visiting Surgeon to Charity and Touro Hospitals, New Orleans. Octavo of 1206 pages, with 854 illustrations, entirely original. Philadelphia: W. B. Saunders Company, 1908. Cloth, 6.50 net; Half Morocco, $8.00 net.

The third edition of this work contains 1204 pages, over 200 more than the previous issue, and about 600 more illustrations. As stated in the preface, the changes comprise the omission of 29 pages of text, covering 25 operations, and the omission of 42 old pictures; the addition of 123 pages of text, describing 106 operations, and 331 new pictures.

The book is arranged in two parts, the first entitled "The Operations of General Surgery," including operations upon vessels, lymphatics, nerves, bones, joints, muscles, tendons, ligaments, fasciae, bursae, amputations, disarticualtions, excisions; the second, entitled "The Operations of Special Surgery," including operations on the head, spine, neck, thorax, abdomen, pelvis, genital organs, and hernia.

There is a succint exposition of the surgical anatomy in connection with all operations, which is a valuable feature, especially since the anatomical illustrations are profuse and excellent. Many of the most recent operations are described, as well as new modifications and improved technic. All descriptions are relatively brief, as is necessary in a one volume work, but they are quite comprehensive. All matters pertaining to pathology and diagnosis are of course omitted; there is also no discussion of the relative advantages of different procedures for the same object. Usually the author selects one good method and concentrates upon it.

The illustrations are conspicuously numerous and efficient, many of them new; some of the color-print details have been handled a trifle carelessly in the anatomical drawings, so that the color does not overlie its proper part. The index is insufficient.

The work is very commendable, especially for rapid reference among students and casual operators. The author deserves much credit for painstaking, accurate, labor.

Consumption: How to Prevent It and How to Live With It. By N. S. Davis, A.M., M.D., Professor of Principles and Practice of Medicine, Northwestern University Medical School. Chicago. Second edition. 12mo. 172 pages. F A. Davis Company, Publishers, Philadelphia. Cloth, $1.00.

This was one of the earliest semi-popular books on tuberculosis. It appeared in 1891 at a time when there was not a fraction of the public interest in the subject which is now manifest. It has now been revised and contains much valuable information, not only for patients, but for physicians as well.

A Manual of Clinical Diagnosis. By James Campbell Todd, M.D., Associate Professor of Pathology, Denver and Gross College of Medicine, Denver. 12 mo. of 319 pages with 131 text-illustrations and 10 colored plates. W. B. Saunders Company, Philadelphia, 1908. Flexible leather, $2.00 net.

Just why the above title was given to this little book is not apparent. "Manual of Laboratory Diagnosis" would be a more fitting title, for it deals only with laboratory methods. The author describes all the ordinary laboratory procedures in a concise, painstaking manner. It is beautifully printed and bound in limp leather. The illustrations are good.

As a short manual, it is to be recommended.

Pathological Technique. Including Directions for the Performance of Autopsies and for Clinical Diagnosis by Laboratory Methods. By F. B. Mallory, M.D., Associate Professor of Pathology, Harvard Medical School; and J. H. Wright, M.D., Director of the Pathological Laboratory, Massachusetts General Hospital. Fourth Revised Edition. Otavo of 480 pages; illustrated. Philadelphia: W. B. Saunders Company, 1908. Cloth, $3.00 net.

Mallory and Wright's book is too well known to require an extensive review, It first appeared in 1897 and at once became the guide on laboratory methods. After being once reprinted, it was revised in 1901 and again in 1904. This edition (the fourth) has been brought up to date by the inclusion of various technical processes, chief among which is Wright's method of preparing bacterial vaccines.

The book will remain the best of the laboratory guides.

County Society News

Calhoun.

The 32nd annual meeting of the Calhoun County Medical Socity was held at the Sanitarium Chapel, in Battle Creek, Tuesday, December 1, 1908. The meeting was attended by over fifty members and as many more interested in medical topics.

The society, as a unit, voted favorably upon the plan for a Medical Defense League as presented by the committee.

The scientific program contained numbers by Dr. Inglis of Detroit, Dr. Barrett of Ann Arbor, and the President's address by Dr. Riley, retiring president.

Dr. Inglis' paper is to appear later in the JOURNAL. It was a practical, up-to-date handling of the subject, "Ergot." Dr. Inglis brought out some very practical suggestions as to the uses to which ergot may be put, emphasizing many of the statements of Dr. Livingston of New York, as to its use.

Dr. Barrett, Director of the State Psychopathic Ward at Ann Arbor, gave a very interesting and practical paper on "The Practice of Psychotherapy."

Dr. Riley's address was entitled, "The Nerve Cell in Health and Disease." It was illustrated with 200 lantern slides especially prepared for the address. Unfortunately, the lateness of the hour obliged an adjournment before the completion of the paper, which will be completed at a later date.

The election of officers for 1909 resulted as follows: President, George B. Gesner, Marshall; Vice-President, Herbert A. Powers, Battle Creek; Secretary-Treasurer, Arthur S. Kimball, Battle Creek. Delegates, W. H. Riley, Battle Creek, and W. C. Marsh, Albion. Alternates, M. A. Mortensen, Battle Creek, and S. R. Eaton, Battle Creek.

The next meeting will be held in Marshall, the first Tuesday in March. The program will be a symposium on "Anesthesia," preparation for which has been under way for three months.

The year closed was the 32nd since the organization. There are 79 in active membership, three in arrears, and three new members admited for 1909.

A. S. KIMBALL, Sec'y.

Chippewa.

The annual meeting of the Chippewa County Medical Society was held December 1st, at Park Hotel, Sault Ste. Marie. Twelve members were present. The Secretary reported a very prosperous year for the society.

The officers elected for 1909 are as follows: President, J. J. Griffin, Sault Ste. Marie; Vice-President, H. E. Perry, Newberry; Secretary-Treasurer, James Gostanian, Sault Ste. Marie; Delegate, E. H. Webster, Sault Ste. Marie; Alternate, G. J. Dickinson, Sault Ste. Marie.

After the election, the annual banquet was held at which Dr. C. J. Ennis acted as toast-master in his usual jolly manner. All present reported a delightful time.

JAMES GOSTANIAN, Sec'y.

Delta.

The Delta County Medical Society held its annual meeting at Elks' Hall, Escanaba, on the evening of December 11, 1908. The officers elected for the ensuing year are as follows: President, H. W. Long, Escanaba; Vice-President, A. J. Carlson, Rapid River; Secretary, W. A. Lemire, Escanaba; Treasurer, G. W. Moll, Foster City; Member Board of Directors, A. S. Kitchen, Escanaba; Delegate to State Meeting, O. C. Breitenbach, Escanaba; Alternate, G. W. Moll, Foster City.

Following the meeting a banquet was served at which the society had as its guests Dr. C. J. Ennis of Sault Ste. Marie and a member of each of the various professions in the county.

A. J. CARLSON, Sec'y.

Houghton.

The regular December meeting of the Houghton County Medcal Society was held Monday evening, December 7, 1908, at the Arlington Hotel, in Calumet.

The program was a symposium on "Surgical Tuberculosis," divided into three parts.

1. That of the Bones, by Dr. John McRae of Centennial. Discussion opened by Drs. H. M. Joy and A. C. Roche.

2. That of the Joints, by Dr. R. S. Lee of Opechee. Discussion opened by Drs. P. D. Bourland and H. H. Ruonavarra.

3. That of the Glands—Scrofula—especially those of the Neck, by Dr. C. H. Rodi of Calumet. Discussion opened by Drs. L. A. Farnham and Murdock Kerr.

All of the above papers were limited to 15 minutes.

The next annual meeting of this society will be held at the Douglass House, Houghton, Monday evening, January 4th, 1909. A banquet will be given after the reading of the Secretary's report and the election of officers.

Resolutions wre also passed at this meeting, authorizing the Secretary to write a letter to the proprietor of the most prominent hotel in the county, thanking him for, and commending his action in refusing accommodations to a quack "genito-urinary specialist," who had applied to him for accommodations for several weeks at the hotel, offering him very attractive remuneration therefor.

W. D. WHITTEN, Sec'y.

Ionia.

The Ionia County Medical Society held its first monthly meeting at the Town Club rooms, Ionia, December 10th, with 18 physicians present. The retiring President, Dr. C. B. Gauss, not being able to be present, the meeting was opened with a fine address by Dr. E. F. Beckwith.

Dr. George More read a scholarly paper on "Rabies in Man and Animals." Dr. J. McCann opened the discussion in a masterly manner. Dr. E. W. Ogden's paper on "Galvanism and Faradism in the Treatment of Disease," was well written, clean, concise and comprehensive. Dr. B. O. Erricsson's discussion was in a happy vein showing familiarity with the entire subject. The general discussions following these papers were animated, interesting and instructive.

The following committees made partial reports and were given further time to complete their work: Public Health, Dr. Cope, Chairman; Delinquent Accounts, Dr. Allen, Chairman; Medical Defense, Dr. Gauss, Chairman; The Mann Bill, Dr. Broadfield, Chairman.

Ionia County invites the Fifth Councilor District Association to meet with them at Belding, on the second Thursday in January, 1909, the physicians of the "Silk City" to act as hosts and entertain.

The officers elected for 1909 are as follows: President, E. R. Beckwith, Ionia; First Vice-President, T. R. Allen, Ionia; Second Vice-President, George More, Ionia; Third Vice-President, J. D. Broadfield, Orange; Secretary-Treasurer, C. S. Cope, Ionia; Censors, R. W. Alton, Portland; J. F. Pinkham, Belding; C. B. Gauss, Palo; Delegate, C. S. Cope, Ionia; Alternate, J. E. Furgeson, Belding.

C. S. COPE, Sec'y.

Jackson.

At the annual meeting of the Jackson County Medical Society, held at Jackson December 3, 1908, Dr. Charles W. Edmunds of the University of Michigan gave an interesting and instructive address on "Progress in Therapeutics."

Dr. N. H. Williams read a paper on "Some Thoughts in Therapeutics."

Dr. F. W. Rogers, the retiring president, spoke on the "Hypodermic Treatment of Syphillis."

The society endorsed the proposed plan for medical defense as now being worked out by the State Society, and a committee was appointed to investigate the plan adopted in some counties of caring for the indigent poor.

The following officers were elected: President, Dr. E. N. Palmer of Brooklyn; Vice-President, Dr. C. G. Parnall of Jackson; Secretary, Dr. R. Grace Hendrick of Jackson; Treasurer, Dr. A. J. Roberts of Jackson.

R. GRACE HENDRICK, Sec'y.

Kent.

The annual meeting of the Kent County Medical Society was held on December 9th, 1908, with 68 members present. The year that has just closed may be aptly termed "Our Banner Year," and one in which the society has been one not in name only, but rather a live, active organization.

The Secretary's annual report showed that during the past year 17 meetings had been held with a total attendance of 474, and an average attendance of 29. At these meetings there were 17 scientific papers read, 37 clinical cases reported, 96 members engaged in the discussion and three invited guests read papers before the society. The Secretary handled 2,588 pieces of mail matter during the year. The special work accomplished by the society was as follows:

The Milk Commission and the Obtaining of Certified Milk.

The Agitation of the Question of Police Ambulance Surgeon.

The Delivery of Anti-tuberculosis Lectures.

The Holding of a Public Meeting on Social Purity.

The Prosecution of Quacks and Quack Advertisements.

The Fifth District Annual Meeting and Banquet.

The Establishment of the Grand Rapids Physicians' Association.

During the year in the notices that have been sent out we have persistently encouraged the reporting of clinical cases with a result that there has been an increased of nine cases reported.

Attendance. In spite of all that has been accomplished, I cannot but feel that there is room for improvement and betterment. The society has a membership of 105. The average attendance has been 29, or in other words about 25 per cent of the members have attended and what has been done has been accomplished by this faithful 25 per cent. The question arises what might we not accomplish with an average of 50 or 75 per cent attendance. Why are the other 75 per cent members?

The sooner we realize that this society is the individual member's society, the sooner we realize that we have other duties than those pertaining to our immediate clientele, the sooner we broaden our mental vision and awaken to the fact that association with our fellow physicians will enable us to mold public opinion and wield an influence in the affairs of our city which is not possible in any other way, then and not till then will our meetings be better attended and inducive to greater good and better work. To accomplish this it is necessary for every member to act as a self appointed missionary and not only unite and attend the meetings, but also induce his neighbor to unite and attend the meetings. The excuse of business is of no avail. The observer of the past will have noticed that whenever an outside guest reads a paper, our average attendance was 56 to 84. Why not such an attendance always? This is your society. Yours if you choose to make it of inestimable value not only to each member but also to our immediate vicinity. Yours if you choose to make it a leader, director and authority in all our civic and public medical problems. Yours aso, if you choose, to make it a society in name only. A somnolent, listless, inactive body, a detriment to all connected therewith. This, gentlemen, is your greatest problem for solution during this coming year. Shall we have a better, more active, better attended, stronger scientific and public spirited organization or shall we stagnate in the pool of inactivity? This solution lies with you individually.

The Anti-Tuberculosis Committee through its chairman, Dr. A. H. Williams, in rendering its annual report, stated that at the beginning of the year, the committee, after canvassing the various

features of the Tuberculosis Crusade, decided to work along the lines of public education A circular letter was addressed to 106 churches and 15 clubs, requesting the opportunity of presenting some phase of the tuberculosis problem to these organizations. It also gave the title of five different papers and a list of 18 voluntary speakers from the society. Thus far six talks have been given in various churches and numerous engagements have been made for the winter's campaign.

The Committee on Pubic Health and Legislation through its chairman, Dr. S. C. Graves, reported that during the past year the committee had had several conferences with the Board of Education and that the services of the members of this society had been offered to lecture to the students in the high schools upon such subjects as Social Purity, Physiology, Personal Hygiene, etc. The chairman of this committee recently read a paper on the "Evils of Medical Quackery" before the class of Applied Christianity of the Fountain St. Baptist Church with the result that this class appointed a committee to work in connection with our society in disposing of this question. The recommendation was also made that during the coming year we hold a public meeting and discuss before the public the various phases of this subject.

The Milk Commission—Dr. C. H. Johnston, Chairman: Some of the work that has been accomplished by this commission was reported in the JOURNAL a few months ago, and consequently it is not necessary to recapitulate the splendid work that has been accomplished by this commission. The commission contemplates having during the winter months a milk competition among the various local dealers and a few months later a milk exhibition along the same lines of the "Tuberculosis Exhibition" that has been exhibited in various places. By means of this exhibition it is hoped that the public will be educated so they may know what certified milk is, its points of distinguishment, etc., etc. The commission will also endeavor to father a bill before our State Legislature restricting and specifying the use of the term "Certified Milk." It is needless to state that the work of this commission is one in which the society takes great pride and feels itself fortunate in having such a hard-working active commission.

Dr. Ralph H. Spencer, our Councilor, in making his address to the society, made the following recommendations:

"1st. I would recommend that the new administration take up and work out some solution for regulating contract practice.

"2nd. Medical Defense Movement. When my attention was first called to this movement I was personally a luke warm supporter, but after looking up the matter more thoroughly, I have become an ardent supporter, mainly on the ground that it would unite the profession into a united front for medical defense.

3rd. That we may keep abreast with the times, I would recommend that you take up at your earliest convenience the matter of Suggestive Therapeutics. This is a matter that is attracting particular attention in the Eastern States under the name of "Emmanuel Movement." When prominent neurologists are giving this matter so much attention, it behooves us to be alert and abreast of the times.

"4th. The matter of admitting homeopathic physicians to our membership should receive your early and favorable consideration."

The retiring President, Dr. George L. McBride, delivered his annual address.

At the last annual meeting the retiring president of this society made the statement that the year which ended with his term of office had been the most successful in the history of the organization. The statement made at that time, no doubt was true and in the natural course of events should have been. A society composed of progressive, educated practitioners of medicine, alive to their own interests and their responsibilities to the public, and actuated as they should be by a desire to maintain the honor of a noble profession, should show a healthy and substantial improvement each successive year. Tonight I desire to make the statement, and I make it without fear of successful contradiction, that the year which this meeting will bring to a close has been the banner year in the history of the K. C. M. S. The credit for this favorable showing is not due to any individual officer, or committee or member, but rather should be ascribed to the harmonious, energetic, and systematic efforts of the various units which go to make up the society. The interest and enthusiasm manifested by the members and the various committees has assisted and encouraged the officers materially in their duties and contributed largely to that success which has attracted the attention not only of the state society but of every other medical society in the State.

But while we congratulate ourselves upon the

work accomplished and the success achieved, we should realize that we have scarcely begun to cover the possible scope of our usefulness.

One of the purposes of this society, as a unit of the state society, should be to unite into one compact organization the entier eligible medical profession of Kent County. Although the number of members in good standing is greater at present than at any previous time since the organization of our society, only about 40 per cent of the desirable material has been gathered in; and of these the average attendance during the past year has been only a trifle over 25 per cent.

The problem of doubling our membership and average attendance is one that should receive our earnest consideration during the coming year. Personally I believe the solution lies in making the meetings so attractive from a social as well as from an educational standpoint that no physician will feel that he can afford to miss them. The question of a broader and more liberal interpretation of the word "eligible" as applied to candidates for membership in the society will probably be submitted for your consideration in the near future. The opinion is gradually gaining ground not only in this State but in every State in the Union, that every legally qualified and reputable physician regardless of school or pathy who is of good moral and professional standing should be eligible for membership in the American Medical Association.

In the November issue of the *Detroit Medical Journal* the following article appears under the title, "The County Society Broadens:"

"At the first November meeting of the Wayne County Medical Society a highly important step in advance was made. This was the vote to amend that article of the Constitution relating to membership. Now every physician residing and practicing in Wayne County and legally registering as such, who is in good professional standing, shall be eligible for membership. This mentions no school or 'pathy.' Any honest physician whose work meets the approbation of his fellow practitioners who now belong to the society, may be admitted. The fact that such an amendment could be carried is in itself a very significant fact, indicative of the wider tolerance of the modern profession. Here is evidence that we are progressing toward that dignified and unified profession which shall come when gross errors are eliminated and the truth prevails."

At a meeting of the county secretaries of the State held in Detroit, Sept. 30th, Dr. S. C. Cope stated that the Ionia County Society, of which he is secretary, had decreed perpetual amity. To quote his own words: "The 'Homeop.' or the Eclectic is as welcome to stretch his legs under our mahogany, partake of our banquets and smoke our cigars as is the most dyed in the wool regular; and we have made the discovery that he is as wise and witty as the best, that he is a lovable and companionable man, a royal good fellow, we like him and he likes us and so we grow, having good times among ourselves, and finding approval among all the people."

Prominent members of the New York Homeopathic Medical Society have publicly and repeatedly stated that there are now practically no homeopathic practitioners.

Homeopathy having ceased to exist, the time has come when the regular physicians should no longer, by refusing to consult and associate with so-called homeopathic practitioners, recognize their separate existence.

Another purpose of the county society shoudl be to extend medical knowledge and advance medical science. One important factor in the extension of medical knowledge in the county, is the attendance at the society meetings. Although the average attendance during the past year has been 50 per cent greater than that during any previous year, the records show that this average has been only 25 per cent of the membership. If we are to fulfil the purpose of our organization some means must be devised to induce a larger attendance at the meetings. We have observed that whenever the paper of the evening has been furnished by an invited guest, not only has the attendance been doubled but the discussions have been more enthusiastic and profitable. This point should be taken into consideration in the arrangement of the program for the coming year. Dr. Oakman, chairman of the Program Committee, Wayne County, says, "It goes without saying that attractive programs are necessary for the success of a society; the practitioners of any county may be whipped into line for membership, the dues may be efficiently collected, and the officers wisely chosen, but the meetings will not be well patronized unless particular pains is taken with the program."

During the last two years many of the county societies have supplemented the usual program of their meetings by a regular course of postgraduate work. A schedule of study is published weekly in the *Journal of the American Medical Association*, giving suggestions, touching

upon various aspects of medical education, and this or a modified one is made the subject of study and discussion at the weekly meeting. In my opinion this idea if fully developed and carried out would do more than anything else could possibly do to extend medical knowledge and advance medical science. A regular curriculum of studies suitable to the needs of the profession, and sufficient to cover a year's study, could be arranged by the officers of the A. M. A. or some other properly constituted authority, and published from week to week in the *Journal of the American Medical Association.*

A week or two weeks after each journal is received, the outline of study published in it could be taken up at the society meeting, and an hour or two spent upon it in the way of discussions, grinds, quizzes, etc. To carry the idea still further, at the end of each year a thorough examination might be given upon the year's work and certificates issued to those entitled to them. The public would soon learn to know and appreciate their value as an evidence of progressiveness and professional ambition.

If some system similar to this could not only be recommended, but made universal and compulsory as a requisite for remaining in the practice of medicine, it would extend medical knowledge and advance medical science in a way hitherto unknown; it would be a means of separating the chaff from the wheat of the profession and would elevate the practice of medicine to the pedestal where it properly belongs. Owing to the faulty system of medical education, loose medical laws, and lack of desire and incentive to study, in vogue until recent years, there are regularly licensed physicians in every community who are a blight upon the profession and parasites upon the public. Under a system of the kind outlined above the progressive and up-to-date physician of Grand Rapids would be spared the humiliation of hearing a legally qualified medical practitioner who stands on an equal footing with himself in the eyes of the community, publicly deny the microbic origin of any disease, and state that disease producing germs only exist as a product of a diseased imagination. Under such a system the medical profession of our city would not be subjected to ridicule in the eyes of the public by having one of its members who is supposed to be up to the standard of professional education, announce through the columns of the public press that hydrophobia is all a myth, and that the physician or health officer who recognizes the existence of such a disease is a fit subject for a lunatic asylum. Under such a system the older member of the profession when called in to consult with and advise a younger physicion would not be likely to recommend hot poultices and implicit faith in Providence as the most rational treatment for strangulated hernia.

However humiliating the confession may be, that lack of confidence and respect manifested toward us by the laity, is mostly due to weakness in our own ranks; a weakness which would not and could not exist if every physician were compelled to maintain the standard of professional education which the public and the profession as a whole have a right to demand.

During the past year the social feature of the society has not received the attention which its importance demands. This can not be attributed to apathy on the part of the committee in charge of that department, but is due mainly to the usually depleted condition of the treasury, and the fact that refreshments cost money. The promotion of friendly intercourse and fraternalism is a function of the county society with which we cannot afford to dispense; and I would strongly urge upon the members the necessity of adopting some means whereby a fund could be created and maintained for that purpose. I believe nearly every member would be willing to sign an agreement to donate a nickle to this purpose for each time he is absent from the regular meeting; and if so, in this way enough money could be raised without burdening anyone to make the social function a prominent and profitable feature of the society work. I sincerely hope the social committee will take up this matter with a vim during the coming year and furnish us with enough Dutch lunches, banquets and good cheer to make us think life is worth living.

Dr. C. D. Morris of Pontiac, speaking upon the social features of the county program, said, "These things add greatly to the success of a society. Technical papers are all right, they are enlightening, and they indicate the preference of the profession and strengthen our views and impress upon our memories indelibly, facts which we might not otherwise retain; but when we meet in social function we meet the member who we perhaps felt was a monster cussed Indian (and knew so because our patients told us so, and they told us so many times that we were almost inclined to believe it), but at the social function we shake hands with him and talk with him and

find that he is sincere and that he is trying to do the same as we are."

The work of the Committee on Public Health and Legislation, the Antituberculosis Committee and the Milk Commission, the reports of which you have already heard, have been of the highest order, and a credit to the society and county. No one who is not in touch with these committees can appreciate the expenditure of time and gray matter which the faithful and conscientious performance of their duties incurs. It is largely due to their efforts that the public are beginning to realize that the health of the city depends to a great extent upon the medical profession, and that the Kent County Medical Society is alive to the situation.

An important function of the county society should be to educate the public in matters pertaining to public health and sanitation, and the committeeman who performs the duties devolving upon him in this respect must be prepared to preach as well as practice. In May last the chairmen of these committees sent a communication to the society asking for volunteers to deliver talks before local literary societies and a fairly vigorous campaign was carried on. It is to be hoped the work so well inaugurated will be continued with increasing success from year to year and that more members of the society can be enlisted into the service.

As an evidence of what these committees have accomplishd I quote the following from an address delivered by the secretary of the State Society in Detroit. He says: "We are to enlighten and direct public opinion in regard to the great problems of state medicine. Are we doing so? Yes, in spots. Why has the Kent County Society come to be looked upon as a leader in questions of public welfare? Because it has a few members who are willing to work. What has been done in Kent, can be done in Wayne, in Saginaw, in Bay, in Kalamazoo and in other counties having within their borders the larger cities. We have done much, yet every year opportunities are being wasted. If they were but grasped we would find the profession becoming more capable and honorable and more useful to the public in the prevention and cure of disease, and in prolonging and adding comfort to life."

The question of the advisability of an increase of fees for medical services and the establishing of a uniform schedule of prices for the guidance of physicians and surgeons was brought before this society in the early part of the present year. Owing to the depression in trade and the stringency of the times it was considered advisable to lay the matter on the table until a more opportune time. It was also considered that the profession as a whole, and not the county society should formulate and adopt a bill which would be worthless without the sanction and support of the entire medical profession.

Accordingly this society took up the task of uniting the medical profession of the city into one organization, for mutual protection and benefit. The result was the organization of the Grand Rapids Physicians' Association with a membership of over one hundred. This association has in it the possibilities of enormous benefit to its members and should be supported and encouraged by every physician in the city. Bulletins are published monthly in which are given the names of all parties who have neglected or refused to pay their bills to the members and already the delinquent list contains over fifteen hundred names. Those who are making use of these lists are able to avoid running many worthless accounts, and are able to devote their time and energies to a more profitable purpose. A fee bill will probably be established by the association as soon as practicable.

In March last a committee of three members of this society was appointed to confer with the Board of Police and Fire Commissioners relative to the appointment of an ambulance surgeon. Unfortunately the action was not taken until after the budget had been made up for the year, and as there was no appropriation for the purpose, the board was compelled to reject the proposition. I would advise that the matter be taken up with the board early in the coming year, and if so, in all probability it will receive favorable consideration.

In Chicago the emergency and ambulance service is greatly increased in efficiency by being in charge of the Health Department. The ambulance is always accompanied by a physician prepared to give first aid to the injured and the victims of paralysis or uremia are now taken to the proper place and given prompt medical care, instead of being left to die in a cell at the police station under the impression that they are drunk.

The telephone situation in Grand Rapids is one that should receive the attention of the members of this society as speedily as possible. At present we are burdened with two systems. This is a matter which could be better handled by the Grand Rapids Physicians' Association, but I

would advise that to set the ball rolling the initial step be taken by the society and recommendation made accordingly to the Physicians' Association. The Wayne County Society recently voted unanimously to dispense with one telephone and are having equally as good service at one half the former cost.

During the year this society was called upon to mourn the death of an esteemed honorary member in the person of Dr. George K. Johnson. A noble life, an illustrious career, was exemplified in the high character, the great attainments, the honorable record, the kindly traits and genial disposition of this venerable man who was by common consent the patriarch of the profession in this city. At a special meeting of the society called for the purpose, suitable resolutions of condolence were adopted and these were ordered engraved and sent to the family.

In conclusion, I desire to thank the officers, committees and the individual members for the uniform courtesy and respect shown towards me during my term of office.

The following are the new officers elected for the coming year: President, Collins H. Johnston, Grand Rapids; vice-president, Charles W. Brayman, Cedar Springs; secretary, Frederick C. Warnshuis, Grand Rapids; treasurer, A. Verne Wegner; delegates, first W. J. Dubois, second S. L. Rozema; alternates, first J. C. Kenning, second J. D. Hastie.

F. C. WARNHUIS, *Sec'y.*

Lapeer.

The annual meeting of the Lapeer County Medical Society was held at the Graham House, at Lapeer, Oct. 9, 1908.

Papers were given by Dr. Peter Stewart, of Hadley, on "Anaesthetics," and Dr. Wisner, of Columbiaville, on "Indication of the Tongue in Disease." Both papers brought out a very lively discussion.

The officers elected were: President, Dr. S. A. Snow, North Branch; vice-president, Dr. Peter Stewart, Hadley; secretary, Dr. J. Orville Thomas, North Branch; treasurer, Dr. A. O. Bolton, Attica.

J. O. THOMAS, *Sec'y.*

Muskegon-Oceana.

At the annual meeting of the Muskegon-Oceana County Medical Society held Friday evening, December 4, 1908, the following officers were elected for the ensuing year: Dr. J. F. Denslow, of Muskegon, was re-elected president; Dr. W. L. Griffin, of Shelby, was elected vice-president; Dr. V. A. Chapman was re-elected secretary; Dr. Jacob Cutting, of Muskegon, was re-elected treasurer; Dr. F. W. Garber, of Muskegon, was elected delegate; Dr. J. D. Buskirk, of Shelby, was elected alternate delegate; Dr. G. S. Williams was re-elected director for three years.

At the close of the meeting, the annual banquet was held at the Century Club rooms, which was attended by several invited guests. The attendance at the annual meeting and banquet comprised almost the entire membership of the society.

V. A. CHAPMAN, *Sec'y.*

Oakland.

At the meeting of the Oakland County Medical Society, held in the Supervisors' Room of the court house in Pontiac, the following officers were elected: President, Clark J. Sutherland, of Clarkston; vice-president, T. E. McDonald, Holly; secretary-treasurer, J. T. Bird, Clarkston.

J. T. BIRD, *Sec'y.*

O. M., C. O., R. O.

The annual meeting of the O. M., C. O., R. O. Society was held at Gaylord on December 16th, when the officers for the coming year were elected as follows: President, C. C. Curnalia, Roscommon; vice-president, H. W. Knapp, Johannesburg; secretary-treasurer, A. C. MacKinnon, Lewiston; delegate, C. C. Curnalia; alternate, W. G. Young, Gaylord.

The secretary was instructed to correspond with the physicians of Cheboygan County, extending to them an invitation to join the society.

The members residing in Gaylord served a banquet which was much enjoyed by all in attendance.

The February meeting of the society will be held in Grayling.

A. C. MACKINNON, *Sec'y.*

Tuscola.

The officers of the Tuscola County Medical Society for the coming year are as follows:

President, C. W. Clarke, Caro; vice-president, J. H. Hays, Cass City; secretary, M. M. Wickwire, Cass City; treasurer, W. C. Garvin, Millington. M. M. WICKWARE, *Sec'y.*

Correspondence.

Greenville, Mich., December 9, 1908.

To the Editor:—

Some of the members of the Montcalm County Medical Society have been pleased to notice that in the editorial columns of the JOURNAL you called special attention to the stand that the *Detroit Times* has taken on the medical advertising question.

We wish to congratulate Editor Schermerhorn for publishing a cleaner sheet than his competitors, and we hope that this fact can be made known to every member of the Michigan State Medical Society. We believe it to be the duty of every member of our society to uphold such an admirable policy and to give their patronage and recommendation to a clean newspaper.

There is no doubt that the *Times* is making a great financial sacrifice, but we would like to see Editor Schermerhorn make a clean sweep by taking out all of the objectionable advertisements from his paper.

We have before us the *Detroit Times* of November 30, 1908, and have cut out and enclosed some of the advertisements from this issue, such as Goebel's Bottled Beer, Voigt's Beer, Reingold, Dr. Pierce's Golden Medical Discovery, Dr. A. W. Chase's Ointment and Catarrh Powder, Carter's Little Liver Pills, and Castoria.

We would suggest that the *Times* should omit the liquor advertisements in order to prove the sincerity of its claims, because it is a debatable question as to which is the more harmful advertisement—the Goebel's Bottled Beer or the Chichester Pills. Are the medicines of the Peruna type any more objectionable than Pierce's Golden Medical Discovery?

Editor Schermerhorn has certainly made a move in the right direction. Let us help him to go a step farther, for he has a cleaner paper than many of our own medical journals.

Yours fraternally,

F. J. FRALICK, M. D.

News

The Cooper Medical College, San Francisco, has been merged into Leland Stanford University and will henceforth be known as the school of medicine of that university.

Dr. Carl J. Larson, a member of the staff of Negaunee Hospital, has resigned, and will be succeeded by Dr. P. S. Wilson, of Grand Rapids.

The medical students of the University of Michigan have organized a medical association, called the Medical Review, with membership drawn chiefly from the senior and junior classes.

A State Hospital for Tuberculosis has been recently opened in North Carolina, near Aberdeen, Cumberland County. Patients are already under treatment there.

Dr. J. O. Parker, of Owosso, has been elected captain of Company H, Third Regiment, M. N. G., to succeed Capt. Fred E. Vandine, resigned.

Dr. F. J. McDaniels, of Alpena, had a narrow escape recently, when his automobile collided with a freight engine on a street crossing. The machine was demolished, but the doctor sustained only slight bruising.

An Antituberculosis Society has been formed at Hillsdale, with thirty members, as the result of recent addresses by Dr. Vaughan, of Ann Arbor, and Mr. McDuff, of Jackson. The officers are: Rev. W. F. Jerome, president; Dr. W. H. Sawyer, vice-president; H. C. Blackman, treasurer.

Dr. Switzer, of Grand Rapids, has made arrangements to practice in Fenton, renting the offices formerly occupied by Dr. J. B. Rice.

The Board of Health of Holland has begun the practice of furnishing free to all local physicians a supply of tuberculin for the cutaneous reaction in diagnosis.

Dr. De Lano, health officer of Grand Rapids, while driving his automobile in the evening recently, collided with a street car; he escaped injury, though the auto was badly damaged.

It is said that Dr. J. B. Bradley, upon retiring from the office of Auditor-General in January, will resume the practice of medicine in Eaton Rapids.

Dr. Otto Scherer of Detroit has been appointed a county superintendent of the poor.

Dr. J. F. Sudman, of Kalkaska, is removing to Jackson, where he will be associated in practice with Dr. Haynes.

Dr. Bliss, for 35 years in practice at Fowler and Maple Rapids, has sold his business and purchased the Hemingway Sanitarium at Owosso, of which he will take personal charge.

Recent robberies in Benton Harbor resulted in losses to Drs. Morris, Burke, Enders, and Parsal.

Dr. J. B. Martin, of Traverse City, has been taking a vacation in Detroit and Ann Arbor.

Drs. A. I. Lawbaugh, C. W. Yarrington, and C. H. Rupprecht, of Calumet, spent ten days, in November, at the Mayo's Clinic.

The Houghton County Anti-Tuberculosis Society has instituted a very active campaign to raise funds for a trained visiting nurse from Boston. The sale of Christmas stamps is the means. They expect to realize $1,000 for them.

The Grand Rapids Public Library has arranged a very attractive course of eight lectures by representatives of various municipal boards and departments, showing the work they do and the money they receive and spend for the city. It is planned to make this the most instructive series of talks on the work of the city government of Grand Rapids ever given. The series will be interesting and instructive not only to taxpayers, but to every one who is interested in municipal problems.

The next meeting of the Northern Tri-State Medical Association will be January 12, 1909, at Ann Arbor, Michigan.

Marriages

George M. Belhemeur, M. D., Negaunee, to Miss Louise C. Wermer, of Lake Linden, November 9.

Dr. Robert M. Gubbins, a physician of Calhoun County, to Mrs. Cora Lutz, at Ceresco, December 12.

Frank S. Bachelor, M. D., to Bertha M. Lypps, M. D., both resident physicians in the Eastern Michigan Asylum at Pontiac, December 10.

Deaths

James Hall Reed, M. D., University of Louisiana, 1868, and Jefferson Medical College, 1870, later studying in Paris and Heidelburg, died at his home in Battle Creek, November 25, 1908, aged 64, of cirrhosis of the liver.

Dr. Reed was born in 1844, in Warrenton, Va., enlisted in the 14th Mississippi at the outbreak of the war; fought throughout the war, although spending some time in the Federal prison, rising to a lieutenancy from the ranks.

Dr. Reed came of illustrious and patriotic stock, being a grandson of the Hon. Thomas B. Reed, first Attorney-General of Mississippi, and a grandnephew of John C. Calhoun. He was Vice-President, for Michigan, of Jefferson College Alumni, for three years.

Dr. Reed was well known throughout the state for his contributions on diabetes and has written many articles upon that subject. He was a member of the American Medical Association, Michigan State Medical Society and the Calhoun County Medical Society.

Donald David Duggan, Trinity College, Canada, 1895, died at his home in Battle Creek, Michigan, November 2, 1908, of paralysis, aged 38. Dr. Duggan was an active member of the Calhoun County Medical Society since 1897. Two years previous to his location in Battle Creek, he was assistant surgeon in the Children's Hospital in Toronto.

Oliver W. Hatch, M. D., of Cassopolis, for over fifty years a practitioner of medicine, died at his home, November 11, from pneumonia, aged 83.

Granger V. Randall, M. D., of Tecumseh, died suddenly at his home, November 25, from pleurisy, aged 50.

Dennis J. Boudrean, M. D., of Newberry, died at his home, November 19, from typhoid fever, aged 33.

Oscar Kirchgessner, M. D., formerly associated with Coroner Bennett, of Detroit, died in Denver, December 11, of tuberculosis.

Progress of Medical Science

MEDICINE.

Conducted by

T. B. COOLEY, M. D.

Diagnosis and Treatment of Pancreatitis—CHALMERS WATSON refers to his paper in the *British Medical Journal*, April 11, 1908, on Cammidge's glycerose reaction in the urine of patients with pancreatic disease, upon which Mayo Robson places much reliance. The present article is based on over 500 cases studied since that time with reference to this reaction, which he considers of great value. His observations have led him to believe that pancreatic inflammation is more common than is generally supposed—both as a primary disorder or in association with local disease of adjacent parts, such as gallstones and gastric ulcer, and as an accompaniment to various constitutional disorders.

He does not discuss the fulminating cases of pancreatic disease, which can be relieved only by immediate operation, confining himself to the mildly acute, subacute, and chronic forms. A convenient division is into cases with and without jaundice. A striking point is the great variety of the clinical manifestations, some cases simulating closely severe or pernicious anemia, others showing simply slight indigestion, and perhaps some neuritic pains, still others only a general weakness, with no definite localizing symptoms, so that the urinary findings may be the only guide.

Progressive cases tend to a fatal issue, and probably many patients who were supposed to have died from deep-seated malignant disease were really victims of pancreatitis. He argues with Mayo Robson that catarrhal jaundice may often be due to primary inflammation of the pancreas, and points to the urine reaction and pain on deep pressure over the head of the pancreas as aids in differential diagnosis. He has obtained these same signs in a number of cases of constitutional disease, such as rheumatoid arthritis, gout and alcoholism, and has relieved the symptoms referable to the digestive tract by discontinuing the carbohydrate diet usually given in gouty conditions and feeding more protein.

He emphasizes especially the following points regarding differential diagnosis. In jaundice of doubtful origin: (a) A negative urine test is against pancreatitis; (b) in cases of choleithiasis a positive reaction indicates pancreatitis, and is a strong evidence that the stone lies at or near the duodenal end of the common duct; (c) where cholelithiasis can be excluded and the clinical features point to organic disease of the pancreas, a negative reaction indicates malignancy.

Glycosuria is more common in inflammatory conditions of the gland than in malignant disease, but may be present in late stages of malignant disease.

The pain of pancreatic disease is referred to the epigastrium and radiates to the left, while the pain in disease of the gall-bladder and ducts is referred to the right hypochondrium and radiates to the right.

An acute onset with pain and pyrexia points to an inflammatory affection.

Emaciation, anemia, and asthenia may be marked in pancreatitis as in advanced malignant disease.

In not a few cases of indigestion with flatulence, abdominal discomfort or pain having no distinct relation to food, constipation, and sometimes pale, fetid movements, the primary trouble is in the pancreas. Pain on deep pressure over the head of the gland is a prominent feature in these cases.

As to treatment, he recommends light diet, chiefly proteid, with calomel and a morning saline for a few days at the onset. The bowels should be attended to throughout, and enemata or flushes may be of service. He considers the Metchnikoff "lacto-bacilline" sour milk preparation valuable to improve the intestinal condition. Pain is treated by fomentations, ice-bags, or morphine when necessary. Excretion by skin and kidneys should be encouraged.

Cases which do not respond to medical treatment require operative handling. The operation may be simply opening the abdomen and manipulating the gland freely, loosening adhesions and relieving tension, or it may be a temporary or permanent drainage of the gall-bladder when the duct is obstructed by the pancreatic swelling. He thinks that caution should be used in recommending operation in the cases without jaundice in which the leading features are gastric symptoms, some constitutional disturbance, pancreatic reaction in the urine, and perhaps occasional glycosuria. Robson and Cammidge have strongly advised operation under these conditions, but Watson thinks medical treatment should be given a thorough trial first.—*Lancet*, Nov. 21, 1908.

SURGERY.

Conducted by

C. S. OAKMAN, M. D.

Peritonitis in Children from Unknown Sites of Infection.—DOWD gives a few case reports which present interesting problems of diagnosis, etiology, prognosis, and treatment. "Children are more likely to have rapidly spreading, insidious forms of peritonitis than are adults, since they are less likely to be constipated during its course, and hence have less of that tympanites which is so hard for the patient, but which is tell-tale to the doctor. They are much more likely to have associated cerebral symptoms, so that very competent observers are sometimes at a loss whether a given case is to be considered as primarily cerebral or abdominal. Again pulmonary inflammation is often accompanied by localized and abdominal pain and rigidity, so that children with beginning pneumonia are believed to have appendicitis. Pneumococcus peritonitis, either isolated or associated with other pneumococcus inflammation, is much more common in children than in adults. General gonococcus peritonitis is occasionally found. Tubercular peritonitis is common, and sometimes presents symptoms which are most difficult to interpret."

Other similar cases are reported in literature, and they are almost invariably fatal, especially the streptococcus form. The best pediatrists and surgeons fail sometimes to recognize the condition, on account of the deceptive signs and symptoms stated above. But fewer cases will be missed if we bear in mind the significance of excessive vomiting, prostration, and diarrhea, disregarding of the absence of distention, rigidity, and spasm.

The mode of infection is generally thought to be through the intestinal wall; this is supported by the frequent occurrence of infection of hernial sacs. When the bowel is distended, the blood supply retarded, virulent organisms in the intestine, and the intestinal contents favorable for multiplication, the conditions predispose to infection of the peritoneum. These conditions are more likely to occur in the appendix than anywhere else. Experimentation lends probability to this theory of the etiology.—*Annals of Surgery,* December, 1908.

An Experimental Study of Intraperitoneal Diffusion.—J. L. YATES conducted a series of experiments on dogs, to ascertain the effects of diffusion and absorption, first, of posture; second, of gastro-intestinal activity, as influenced by food, starvation, and morphine. The injection material was a suspension of lamp-black in .85% saline solution, with the dried venom of the water-moccasin snake, and the cobra. Parallel observations were made upon animals that were kept in the dorsal, the head elevated, and the head lowered postures; and upon animals that were fed, starved, and morphinized.

He concludes:

1. Intraperitoneal diffusion results from the operation of purely physical forces, abetted by physiological activities.

2. The greatest attainable restriction of this diffusion must result from the opposition of controllable physical force to the paths of greatest extension and the inhibition of physiological activities.

3. Under similar conditions the rate of absorption varies directly with the extension of diffusion.

4. The restriction of diffusion and consequent absorption is best obtained by the action of generous doses of opium to reinforce the diminished activity in an empty alimentary canal, general bodily quiet with its resultant lessened respiration, and by the maintenance of that position of the body which will oppose the action of gravity to the direction of most disadvantageous extension.

5. The absorption of toxins is dangerous in proportion to the rate and extent of that absorption and, although this is complicated by pathological processes, it is limited by the application of the principles stated above.—*Surg. Gyn. & Obst.,* Nov. '08.

GYNECOLOGY AND OBSTETRICS.

Conducted by

B. R. SCHENCK, M. D.

Local Anesthesia in Major Surgery, with Especial Reference to Abdominal Work.—SCHLEY of New York advocates the more extended use of local anesthesia in surgery. Many cases can be operated on by this method that would be impossible under general anesthesia, on account of heart, lung, or kidney lesions. Shock is much less by this method, there is absence of gastric and respiratory disturbances, and a much more agreeable post-operative period is obtained. This method must be used in selected cases, the character of the disease, of the patient, and the surroundings being factors that affect the choice. The author has done several abdominal operations successfully under local anesthesia, of which he gives a detailed account. Gentleness of handling of the tissues is necessary. The patient feels no pain, and is not made nervous by the technic if properly managed. A very small amount of ether may be needed in some cases, for its mental effect chiefly. The peritoneum and intestines are practically devoid of sensitiveness when no inflammatory condition is present. One hour before operation a small dose of morphine is given. Novocain combined with adrenalin is used for injections into the skin along the line of incision. At intervals of one-third to one-half inch along this line the needle is inserted perpendicularly and injections made. The tissues remain dry and bloodless, and hemorrhage is saved the patient. The operation is begun after fifteen minutes. No bad effects are ever experienced.—*Medical Record,* December 18, 1908.

Treatment of Eclampsia.—FRY, Washington, pleads for prompt evacuation of the uterus in cases of puerperal convulsions. Eliminate pregnancy, he says, and we cut off the source of the toxemia and are in a position successfully to eliminate the poison which has collected in the system, if it has not already gone too far and produced irreparable visceral lesions and damage to the nervous system. The frequency and extent of these lesions bear a close relation to the number of convulsions, hence the importance of early treatment. Since this method has been adopted at the Columbia Hospital, Washington, and in Fry's private practice, he can report 15 cases of eclampsia and one of pre-eclamptic toxemia with only one maternal death, and this last was of a patient practically moribund before the treatment was undertaken. The methods employed to effect prompt delivery were: vaginal Cesarean section in 12 cases; manual dilatation and forceps in 2; multiple incisions, manual dilatation and forceps in 1; symphysiotomy and forceps in 1. Two cases are reported. The infant mortality is, of course, high by this treatment of immediate delivery, but not more so than with other methods. The mortality of full-term infants was 40 per cent, and of the premature 80 per cent. It is a fair inference to make that still prompter treatment could have lessened the infant mortality.—*J. A. M. A.,* Dec. 12, 1908.

Primary Ovarian Pregnancy. The *Lancet Clinic* for December 12, contains the report of a meeting of the Philadelphia Obstetrical Society, held last May, at which Hirst presented a specimen of what he believed to be primary ovarian pregnancy and asked that a committee be appointed from the society to investigate the specimen and determine whether or not it was an instance of impregnation of the ovum, while still in the ovary. Hirst said: Veit, in the "Handbook of Obstetrics" which he wrote for Winkle, can cite but a single case which he thinks is free from all criticism. It is the case of Galliland, presented to the London Obstetrical Society. In the few other cases in which it was claimed there was primary abdominal pregnancy, Veit said they would not stand rigid criticism. In one or two ways the ovum might have extruded from the uterine cavity or from the tube, or quite possibly have been detached from its situation in the ovarian fimbria. In Galliland's case there was no doubt about the implantation of the ovum upon the peritoneal surface of Douglas' pouch. So far as I can see, I have a similar specimen. This ovum was situated just above the utero-sacral ligament on the right side and below the ovary, and extended out almost like a sessile tumor, about one-quarter buried in the peritoneum. The attachment was apparently slight, as it was delivered without much difficulty. There was no hemorrhage, and I had only to sew over the raw surface on the posterior surface of the broad ligament with continuous sutures, after cleaning out the blood clots which filled Douglas' pouch. The operation was witnessed by a number of people. The tubes and ovaries were absolutely unaltered. There was not a single sign of any attachment of this ovum to the ovarian fimbria. It seems to me an impossible proposition that this ovum might have lodged inside the tube and then have completely detached and re-embedded itself in that situation. That is an impossible supposition, and the only approach to an explanation which could throw the least doubt upon this being a primary abdominal pregnancy.

PEDIATRICS.

Conducted by

R. S. ROWLAND, M. D.

An Analysis of Four Hundred Cases of Epidemic Meningitis Treated with the Anti-Meningitic Serum.—The following series of figures of FLEXNER and JOBLING are based upon the analysis of about 400 cases which have arisen in different and widely separate parts. The diagnosis was confirmed by bacteriological examination, and only cases which did not survive the first dose of serum twenty-four hours have been excluded.

There were 75% of recoveries and 25% of deaths. Under one year the death rate was 50%; 1 to 2 years, 42.1%; 2 to 5 years, 23.5%; 5 to 10 years, 11.4%; 10 to 20 years, 23.8%; over 20 years, 26.4%. In general the earlier the injections the better were the results, but the outlook for late cases was not wholly discouraging. FLEXNER and JOBLING found that so long as the diplococcus was present in the meningeal exudate and the mechanical damage to the antatomical structure was not irreparable, the employment of the serum held out hope of benefit. Of the cases treated with the anti-meningitic serum 25% to 30% terminated abruptly, the duration of the active symptoms was about eleven days. There seems little doubt that part of the beneficial effect of the serum injections must arise from the restriction of multiplication and from the greater phagocytosis of the diplococci. This series confirms the conclusions held in the preliminary reports that in the majority of instances recovery is complete and the number of complications small.

DURM concludes from his series of 40 consecutive cases:

(1) The use of Flexner's antiserum is of great value in epidemic cerebro-spinal meningitis. (2) The use of the serum at times aborts the disease, frequently rapidly relieves its symptoms, shortens its course, lessens the liability to sequelae, and greatly reduces the mortality; (3) The serum should be used as early as possible in all cases, even of suspected meningitis. (4) It should be frequently repeated as long as there are symptoms or any tendency to relapse. (5) Late chronic cases are unfavorable for the use of the serum, but any case in which the diplococci are present has some hope of relief by its use. (6) In the discussion of papers by Drs. FLEXNER, CHURCHILL, DUNN, and KNOX, Dr. KOPLIK passed the warning that we sometimes lose sight in the presence of some favorable results, of the natural history of the affection, and that in no disease was this more common than in cerebro-spinal meningitis. DR. HOLT considered the showing very encouraging. DR. ROTCH said that the injections do no harm and advised repeating them within the twenty-four hours in extreme cases. DR. MORSE stated that the disappearance of the organism in the spinal fluid after injection and diminution in the cells indicated the activity of the serum, which should be given early and often. DR. FOREMAN emphasized that the serum may be of value in very late cases. DR. KERLEY said we have had brought before us a method of treatment, alleviation and cure, largely the cure, of a disease that we have heretofore looked upon with little or no hope, so far as medical means were concerned. DR. L. FLEXNER in closing said he did not wish to be put in the position of making an over strong case for the serum, though he believed in it.

As to the manner of production FLEXNER said the serum belongs to the class of bacteriolytic sera, in which we are obliged to use the entire constituent of the organism in its preparation. The serum does not produce neutralization of the toxine according to the law of multiples as in the case of diphtheria and tetanic sera.

In employing a serum of this class it is important to remember that the result depends to a considerable degree upon the concentration. FLEXNER believes that the success which has been achieved by this serum has been in virtue of the fact that you bring a bacteriolytic and somewhat antitoxic substance in contact with the focus of the disease. The thing to be emphasized is that you require this fluid in a certain high degree of concentration, and hence injections made directly into the spinal membranes is the obvious way of accomplishing this desideratum.—*Papers and Discussion at the Meeting of the American Pediactric Society, May, 1909, Archives of Pediatrics,* October, 1908.

OPHTHALMOLOGY.

Conducted by

W. R. PARKER, M. D.

Remarks on the Treatment of Affections of the Conjunctiva and Cornea with Jequiritol.—Jequirity produces conjunctivitis, beginning as an injection of the conjunctiva and finally inflammation and purulent secretion with edema of the lids and enlargement of the pre-auricular lymph node, accompanied by a rise in temperature. This all disappears in from eight to ten days. It was first employed in chronic trachoma with pannus. The serous infiltration of the cornea that is produced favors the absorption of the opacities. Because of the serious results its use in too strong solution has produced, many have abandoned the use of the drug.

The active principle of jequirity is abrin. Some authors think it is an alkaloid, while others think it is a bacillus. The conjunctiva after having received one treatment becomes immune to a second inflammation.

The jequiritol made by Merck constitutes four solutions: one, two, three, and four. Number 2 is ten times stronger than Number 1, and so on.

The author in applying the remedy begins with solution No. 2 and ends with Nos. 3 and 4, using from 1 to 4 drops. Generally during the use of No. 3 the inflammation is produced. If the inflammation is insufficient the procedure is begun again. Twelve cases are reported.—COSMETTATOS, *La Clinique Ophthal,* February, 1908.

Prophylaxis and Treatment of Gonorrheal Conjunctivitis.—The author claims that from 15 to 50 per cent of blindness is due to this disease. An outline of his treatment is as follows:

During the stage of infiltration he avoids all irritants, using argyrol 25 per cent solution, saturated boric acid solution or 1-5000 bichloride solution. Cold compression or ice bag, changing to heat if cornea becomes infiltrated. In the stage of discharge he uses a 10 grain solution of silver nitrate, applying it once daily by means of cotton wrapped on a tooth pick, following with a sodium chlorid solution. The eye must be irrigated from every fifteen minutes to three times a day, depending upon the amount of the discharge. The argyrol solution is dropped in after each washing. In the stage of hypertrophy, cauterization with copper sulphate stick is used. The alum stick may be used.—MICHAEL BEHRMAN, *The Lancet-Clinic,* May, 1908.

When and How We Use Cycloplegics in Refraction Work.—A. DUANE, of New York, gives the following conclusions, based on long practical experience and a special series of tests:

1. A cycloplegic should be employed for determining the refraction in practically all cases, not glaucomatous, below 48 years of age and in some cases above this limit.

2. Homatropin in 2 per cent solution, provided it is used with ordinary precaution, is a safe cycloplegic, and if properly used is effective in the vast majority of cases.

3. It should be repeatedly instilled and the examination made not less than an hour after the first instillation, nor until a test of the accommodation has shown that the latter is as completely abolished as possible.

4. The cases in which homatropine proves inefficient are few. They are marked by varying vision and varying acceptances, discrepancies between the subjective tests and the skiascopic findings, and the persistence of an undue amunt of accommodation (more than one D) even after prolonged action and repeated instillations.

5. In such cases atropin should be used.—*New York State Journal of Medicine,* July, 1908.

GENITO-URINARY SURGERY.

Conducted by

W. A. SPITZLEY, M. D.

Remarks upon the Treatment of Syphilis.—Some of the author's remarks are worthy of consideration by every one coming in contact with individuals infected with syphilis.

We may consider syphilis a curable disease of, as yet, an obscure microbic origin, but still we have to face the fact that an individual once infected, though conscientiously treated, carries to his grave a predisposition to various phenomena most indicative of a diathesis with slow tissue change and degeneration.

In the majority of cases of syphilis we can cure the early lesions, we can render the victim a non-infectious member of the community, we can make it possible for healthy offspring to be the product of a desirable union; but we cannot feel sure of even a reasonable immunity from the appearance of sclerotic and gummtaous changes in the various viscera, long after the original infection has become an almost forgotten entity, unless the patient has adhered to treatment rigorously and led a hygienic life afterward. It is not expedient to allow a syphilitic patient to consider the condition less grave because the secondary symptoms have been mild or absent. Mercury is the one drug with which to combat syphilis from first to last. Iodine has a very definite position in the treatment of syphilis, but it is not to be compared with mercury. The general management of a syphilitic patient is an art. It requires a very intimate knowledge of the physiological action of the drugs used as well as a great deal of common sense in administering them. We know that the virulence of the disease depends largely upon the patient's resistance and we also know that too much mercury may aid in breaking down that resistance. Thus the patient may be made worse by the very means which we are using to effect a cure.

The administration of mercury should be *intermittent,* the duration of treatment must be *chronic.* As a general rule, four mercurial courses should be given during the first year and three in the second and third years. This of course subject to variations. After this iodine should be given intermittently.

After we have carried our patient along successfully, and there has been no manifestation of the disease for years and we feel justified in discharging him, what instructions shall we give him for his future? In answer to this the advice which Fournier gives to his patients when the inevitable question: "Am I cured?" arises, seems most trite: "Yes, I believe you are cured, as far as I have a right to believe so scientifically. But, whatever may occur in the future, whatever disorder may affect your health, remember your former complaint. Never neglect to inform your physician of your special antecedents."—J. BENTLEY SQUIER, M. D., *Amer. Jour. Derm. and G. U. Diseases,* Jan., 1908.

The Pathology and Cystoscopy of Cystitis Cystica.—KRETSCHMER of Chicago describes the gross and microscopic changes occurring in this condition, as well as its history and biography. Morgani mentioned it in 1749. Rokitansky and Klebs recognized it, but not till von Brunn's monograph in 1893 was it carefully studied and expounded. Since then numerous cases have been investigated and the pathology certified.

Grossly, as seen by the cystoscope, the disease shows small bodies projecting from the vesical mucous membrane, varying in size up to .5 c.m. in diameter, usually globular, and yellowish in color. They may be few or many, and similar formations may exist higher in the urinary tract; most often they are seen on the trigonum. They may resemble tubercles or "edema bullosum." These bodies are cystic in character, containing in early stages a thin colorless or yellow fluid, which later may become darker in color and viscid or gelatinous. Pigmentation and calcification have been noted. Microscopically the cysts may be seen on the surface or beneath it; they are lined with flattened epithelium, usually in one layer, especially on the surface, but often in many layers in the deeper portions. The cyst-contents take the eosin stain and resemble colloid. Cysts in the process of formation show smaller cavities, better preserved epithelium, in many layers. The parent structure of the cysts appears to be a nest of epithelial cells, resembling the bladder epithelium, with which they are sometimes seen to be connected. The nests are surrounded by a distinct connective tissue capsule; at their periphery the cells are cylindrical, with large nuclei, and arranged in orderly fashion; towards the centre the cells become more polyhedral and irregularly arranged. Around some nests round-cell infiltration is seen. Occasionally the nests present distinct gland-tubules, but they have no real excretory duct.

As to the origin of these small cysts, the weight of evidence refutes the agency of parasites; it is probable that groups of epithelial cells become detached from the bladder mucosa, either in embryonic life, or as the result of inflammatory or hyperplastic processes; that these detached "nests" degenerate centrally, giving rise to cyst formation.—*Surgery, Gynecology, and Obstetrics,* Sept., '08.